

AFFECTIVE EVENTS THEORY:

A THEORETICAL DISCUSSION OF THE STRUCTURE, CAUSES AND CONSEQUENCES OF AFFECTIVE EXPERIENCES AT WORK

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ABSTRACT

In spite of accepted definitions of job satisfaction as "affect" very little is known about the causes and consequences of true affective experiences in work settings. Working from the basic literature on moods and emotions, we introduce a theory of affective experience at work which emphasizes the role of work events as proximal causes of affective reactions. We discuss the structure of affective experiences, their situational and dispositional causes and their effects on performance and job satisfaction.

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Cranny, Smith, and Stone (1992) define job satisfaction as "an affective (that is, emotional) reaction to a job that results from the incumbent's comparison of actual outcomes with those that are desired (expected, deserved, and so on)" (p. 1). This is a rather curious definition of a construct, including as it does both the essential variable (affective reaction) *and* its presumed causes (outcome-standard comparisons). The fact that there is general agreement with this definition (their conclusion) makes the inclusion of a theory of the construct's causes in the definition of the construct no less troublesome.

However, confusion of construct and causes is not the most troublesome aspect of this definition. More difficult is the fact that job satisfaction *is not* an affective or emotional reaction to a job, or at least it is not as it typically has been studied and operationalized. Judging from the nature of most job satisfaction questionnaires it would be more accurate to argue that *job satisfaction is a positive or negative evaluative judgment of one's job or job situation*. This is decidedly not the same thing as an affective or emotional reaction.

What then is the connection between affect and satisfaction? The answer to this question is found by clearly distinguishing cause and effect. Satisfaction is an evaluative judgment about one's job that partly, but not entirely, results from emotional experiences at work. It also partly results from more abstract beliefs about one's job. Together, affective experiences and belief structures result in the evaluation we call job satisfaction.

Treating job satisfaction as a summary evaluation with both affective and belief antecedents is quite consistent with current positions on attitude formation. While it has long been recognized that attitudes have affective and cognitive correlates, the real meaning of this point, as well as research on the interplay of the two components, is only now taking shape. Breckler and Wiggins (1989) provide a very cogent discussion of this issue. They argue that attitudes are general evaluations encompassing both affect and cognition. The affective component refers to feelings that are "engendered" by the attitude object and "represents emotional experience associated with the attitudinal object." The cognitive component refers to beliefs about the object, the location of the object on dimensions of judgment. Overall evaluations are influenced by both of these components to greater or lesser degrees.

Making this distinction between satisfaction as judgment and the affective experiences which influence this judgment leads quickly to the conclusion that satisfaction and affective experience should be treated as separate phenomena with distinct but overlapping causes and consequences. This, in turn, suggests the importance of studying affective reactions at work independent of job satisfaction.

Paradoxically, in spite of the "accepted" definition of satisfaction as affect or emotion, we know precious little about emotional reactions at work. In this paper we intend to describe a theoretical position on affective reactions which

we hope will serve as a guide to research on the topic. We will suggest a structure for emotional reactions as well as ideas about their causes and consequences. One of the consequences is job satisfaction or dissatisfaction and thus one could argue that a piece of the total position constitutes a piece of a theory of job satisfaction. Theory is perhaps too pretentious. The term is meant only to suggest that there will be conceptual variables integrated into a general framework. In any case, this paper is offered in the spirit of William James (1890) who said "At a certain stage in the development of any science a degree of vagueness is what exists with profit."

THREE THEORETICAL APPROACHES TO JOB SATISFACTION

While the position we will outline focuses on the structure, causes, and consequences of affective experiences, it rests squarely in the overall tradition of research on job satisfaction. Therefore, we begin with a general overview of the previous positions on job satisfaction, and then contrast these positions with one that focuses on affective experiences.

Most specific theoretical positions on job satisfaction can be taken as variants of three general approaches, which we refer to as the "Cognitive Judgment Approach," the "Social Influence Approach," and the "Dispositional Approach." In discussing elements of these positions we will avoid any evaluation of the research literature as good reviews exist elsewhere (Arvey, Carter, & Buerkley, 1991; Locke, 1976).

Cognitive Judgment Approach

By far, the cognitive judgment approach has dominated the theoretical landscape. It is represented most generally by what Lawler (1973) referred to as Discrepancy Theory, and in specific forms, for example, by Katzell's (1964) and Locke's (1976) outcome-value discrepancies, by Ilgen's (1971) discussion of outcome-expectancy discrepancies and by Porter's (1962) position on outcome-need discrepancies. It is also represented by Lofquist and Dawes' (1969) Theory of Work Adjustment, by theories of job satisfaction within the expectancy-value-instrumentality tradition (Mitchell, 1974) and by equity/justice theories of satisfaction (Greenberg, 1982). Lest anyone believe that the advanced age of these seminal references suggests that the position is no longer considered useful, recent papers from these positions continue to appear (Dawes, 1992; Konovsky, Folger, & Cropanzano, 1987; Rice, McFarlin, & Bennett, 1989; Stone, 1992).

While each of the theories has its particular constructs, a general structure exists for all theories in this tradition (see Figure 1). In this general structure

the work environment is represented as a set of concrete or abstract features (job characteristics, pay levels, promotion opportunities, etc.). These features are perceived, not always accurately, by job incumbents who compare their perceptions to some set of standards (values, needs, etc.). In some versions the features have meaning only in a work context (e.g., pay levels, career opportunities) while in other versions more abstract psychological properties are used (e.g., autonomy). In any case, some sort of arithmetic function (differences, weighted differences, ratios, etc.) is used to assess the match between perceptions and standards and this match is the proximal cause of job satisfaction. Over the years the nature of the standards has been a major point of disagreement (see Locke, 1976, for the classic discussion) but the fundamental and underlying structure of the cognitive judgment approach is consistent across different theories in this tradition.

The overarching domination of this approach suggests that it might be useful to examine some of its assumptions. For the most part, these assumptions turn out not to be logical necessities. Rather, they are simply characteristic of research and writing from this tradition.

To begin with, implicit in the cognitive judgment approach is the relative stability of job satisfaction and, consequently, the general unimportance of time as a factor in the study of work attitudes. Certainly environmental features can change and so too can standards, but by and large these constructs are treated as being relatively stable on a day-to-day basis. As such, it makes little difference whether we measure satisfaction on Monday or Wednesday, July or September. Clearly, the cognitive judgment approach would not suggest the usefulness of measuring affective reactions on a daily basis or treating fluctuations as anything but error.

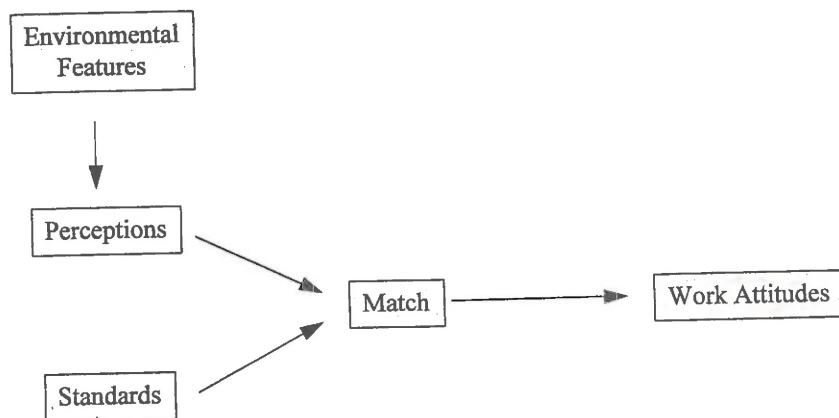


Figure 1. Cognitive Judgment Approach

This point is ironic because much has been made recently of the stability of work attitudes and the implication of that stability for dispositional versus environmental explanations (Gerhart, 1987; Staw & Ross, 1985). The basic conclusion that any demonstrated stability is compatible with both positions (Davis-Blake & Pfeffer, 1989; Gerhart, 1987) is exactly what one would expect because in the cognitive judgment approach both the person and the environment are described in "dispositional" terms. Characteristics of people interact with characteristics of the environment.

Within the cognitive judgment approach a dimensional structure for satisfaction has evolved which focuses on the attributes or features of the environment. This is the distinction generally made between overall and facet satisfaction and it is a natural result of a feature evaluation model of work attitudes. On the other hand, with one very notable exception (see Herzberg, Mausner, & Snyderman, 1959), satisfaction itself is treated as a unitary concept. We may ask, "How satisfied are you with" this or that but the experience of satisfaction is not broken down any further.

This is reasonable for studying satisfaction, the overall evaluative judgment about one's job. However, if it is affect we are after then we must recognize that affective reactions have their own phenomenal structure. For example, a person may be angry, frustrated, sad, or ashamed. All are negative affective reactions yet they may result in quite different behavioral consequences. The possibility of meaningfully distinct affective experiences at work has been ignored by researchers accepting job satisfaction as a measure of affect.

In addition, the focus on feature evaluation has led to a simultaneous neglect of the study of what actually happens at work. A pat on the back, receiving a bonus, an award at a dinner are the real experiences that somehow influence responses to the item "my job provides recognition." Yet, we know very little about these experiences, how people react to them, and how they affect overall evaluations.

Finally, and in spite of the definition of satisfaction as emotion, one could honestly ask "where is the emotion in the study of job satisfaction?" How do we account for the reservationist in Studs Terkel's (1974) *Working* who says about her job "I hated it with a passion. Getting up in the morning, going to work feeling, Oh my God, I've got to go to work." Certainly not by asking her to tell us how much of some feature she wants and how much of some feature she thinks she gets.

Social Influences Approach

In the late 1970s the Social Influences approach, most notably in the form of Social Information Processing Theory (SIP) (Salancik & Pfeffer, 1977, 1978), was presented to the field. An excellent review of this position is provided by Zalesny and Ford (1990).

The basic idea of SIP is that the social environment has both direct and indirect influences on judgments about work. It has direct influences on overall attitudes (Adler, Skov, & Salvemini, 1985) as well as indirect influences on the perceptions (Weiss & Shaw, 1979) and standards (Weiss, 1977) which feed into attitude judgments.

Over the years, many authors have taken great pains to generate a controversy over whether Social Information Processing is a valid alternative to the traditional cognitive judgment approach (see, most recently, Stone, 1992). At its core, with regard to most of SIP's elements, there is nothing inherently contradictory about the SIP and traditional Cognitive Judgment approaches (see Figure 2). Social Information Processing is more a complement than an alternative to Cognitive Judgment in that it fills in some loose ends about factors which influence the basic variables in the judgment process. That is, the Cognitive Judgment approach argues that we make evaluative job satisfaction judgments based on our perceptions of whether or not some desired standards are being met. The Social Influences approach maintains this cognitive process. It simply adds the caveat that social information is a major input into our perceptions and standards.

What then is the source of the idea that SIP and Cognitive Judgment are antagonistic positions? In our opinion, part of the problem is the loose language of the original Salancik and Pfeffer articles which introduced new and unnecessary constructs that were difficult to understand and operationalize. In addition, part of the problem is their presenting "need fulfillment" as representative of all discrepancy positions (thus criticizing all by criticizing the concept of needs).

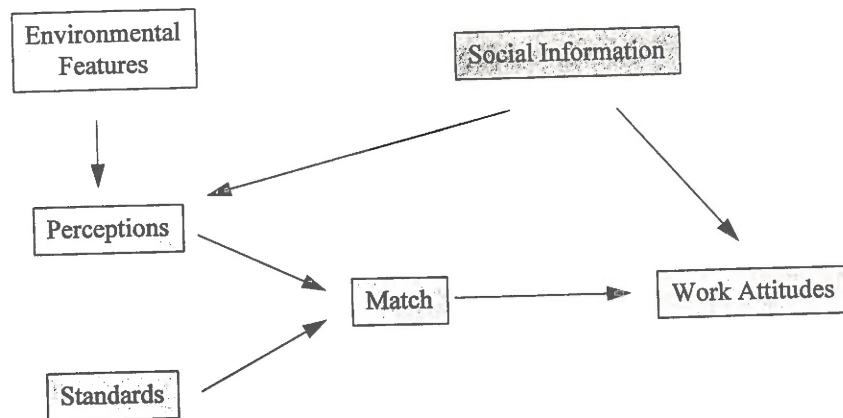


Figure 2. Cognitive Judgment and Social Influences Approaches

However, we also believe that there is a genuine source of conflict between the positions and it centers on one "controversial" aspect of Salancik and Pfeffer's (1977) initial position. That aspect is the frequent reference to the "Social Construction of Reality," as if attitudes were continuously being constructed and reconstructed in a social context. This, we would argue, suggested to some readers that job attitudes have an ephemeral, artificial quality, independent of the reality of an external world of job and work characteristics. The importance of this point is illustrated by this question: "With regard to the construction of job attitudes, is this construction/judgment made and stored and then recalled when attitudes are requested, or is the construction/judgment made and remade each time the attitude is requested, with potentially different information used on each occasion?" Traditional Cognitive Judgment theorists would take the former position, as indicated earlier, although they would not suggest that these attitudes could not be revised in the face of new information. Social Information Processing, some might argue (Zalesney & Ford, 1990), suggests the later position. To a great extent this element of Salancik and Pfeffer's position, an element frankly not well articulated in the initial papers nor ever empirically explored in the literature, does not sit well with those advocating the traditional approach. It has led to a broad brush painting of the whole SIP position as somehow antagonistic to the Cognitive Judgment approach.

We will not try to resolve this controversy. We will only say that current thinking on attitude expression is giving more and more weight to the idea that attitudes generally are not stored and recalled but are "constructed" on demand (Wilson & Hodges, 1992). Further, each construction involves the integration of both stored information relevant to the attitude object and contextual information unrelated to the attitude object. Social information can easily be understood as important contextual information.

Dispositional Approach

The basic idea of the Dispositional approach is this: to some degree, a person's job satisfaction reflects his or her general tendency to feel good or bad about all aspects of life and this general tendency is independent of the specific nature of the job, its positive or negative features. Recently, Judge (1992) has provided an excellent review of the Dispositional position and so we will only touch on the highlights, again focusing more on the nature of the approach than on any evaluation of the research results.

Joseph Weitz first discussed a dispositional approach to job satisfaction and developed what he called the gripe scale to measure it (Weitz, 1952), but current interest on the topic has been stimulated by the work of Staw and Ross (1985). Staw and Ross argued that previous theories of job satisfaction had overemphasized situational causes at the expense of dispositional ones. To find

support for their position they examined the stability of job attitudes over a five-year period for a national sample of men. Their sample did in fact show attitudinal stability, as judged by the correlations of attitudes measured in different years. In spite of the fact that these correlations were smaller among those men who had changed jobs or careers than among those who did not, their data can be taken as providing support for some stability in job attitudes.

As has been noted by a number of people (Davis-Blake & Pfeffer, 1989; Gerhart, 1987), stability by itself does not provide particularly strong evidence for dispositional factors, as the stability could just as easily be a function of stable job features as dispositions. More compelling would be the identification of the relevant individual differences variables underlying the dispositional component. In fact, Staw and Ross (1985) speculated on the nature of the underlying personality variables suggesting that individual differences in affective tendencies, perhaps biologically based, might be responsible.

Since Staw and Ross (1985), research on the dispositional component of job satisfaction has followed two paths. One path has tried to explicate the particular personality traits responsible for the dispositional nature of satisfaction. The other path is embodied in the work of Arvey, Bouchard, Segal, and Abraham (1989) who have attempted to demonstrate an inherited tendency to report satisfaction/dissatisfaction.

Personality Determinants of Dispositional Satisfaction

Almost all of the recent research on personality and job satisfaction has looked at the two personality traits of Positive Affectivity and Negative Affectivity. These are personality traits which predict general emotional tendencies in people. People who are high on Positive Affectivity (PA) tend to be lively, sociable, and often in a positive mood. People who are high on Negative Affectivity (NA) tend to be more distressed and unhappy, focusing on the negative side of things.

Because job satisfaction, like all attitudes, has affective as well as belief components, it is not surprising that differences in affective tendencies have been shown to be associated with differences in job satisfaction. For example, Levin and Stokes (1989) conducted a laboratory study in which they asked people who were either high or low on NA to work on interesting or boring tasks. They found that quite independent of the type of task, their satisfaction with the task was influenced by their degree of Negative Affectivity. Similarly, in two field studies Cropanzano, James, and Konovsky (1993) showed that both NA and PA correlated with global satisfaction. Recently, Watson and Slack (1993) found that PA predicted job satisfaction as long as two years later.

Clearly, general affective tendencies are partly responsible for dispositional aspects of job satisfaction, but what is the significance of this finding? In our opinion, simply knowing that some personality variables account for more

variance in satisfaction is not by itself very interesting. Accounting for more variance is much less important than building a theoretical framework with both dispositions and situations existing harmoniously in the service of explanation. Ultimately, the disposition has to enlighten underlying process.

Do these findings on affective dispositional correlates of job satisfaction help to expand our conceptual understanding of this construct? We think they do in an important but limited way. An underlying theme in this research is the significance of affect. Unlike early correlational approaches to satisfaction, current dispositional studies have been focused on affective tendencies. It appears that these dispositions are capturing the affective, as opposed to the belief, component of job attitudes (Brief & Roberson, 1989). This in turn suggests that the effect of these dispositions is mediated by affective processes. For example, George (1989) and Weiss, Nicholas, and Daus (1993) suggest that emotional dispositions like Negative and Positive Affectivity influence mood states at work and these mood states can influence satisfaction as well as other important work behaviors. The findings on affective dispositions remind us that there are affective influences on satisfaction judgments. It remains to more fully explicate those affective based processes.

Genetic Influences on Job Satisfaction

Staw and Ross (1985) suggested that there may be biologically based explanations for their dispositional findings. Arvey, Bouchard, Segal, Abraham (1989) took this suggestion a step further and examined the possibility of a genetic component to satisfaction by way of estimating its heritability, heritability being the proportion of phenotypic variance accounted for by genetic factors (Willerman, 1979).

In the Arvey, Bouchard, Segal, and Abraham (1989) study, 34 pairs of monozygotic twins reared apart (MZA) were administered the Minnesota Satisfaction Questionnaire and the intraclass correlation for the twins' satisfaction levels was taken as an estimate of heritability. Using this method, Arvey et al. (1989) estimated an heritability level of .31 for overall satisfaction. They also concluded that the heritability of intrinsic facets is stronger (.32) than is the heritability of extrinsic factors (.11). Furthermore, partialling out the effects of similarity in job types had minimal effects on these heritability estimates, leading Arvey et al. to conclude that self-selection into similar jobs could not account for the satisfaction results.

Arvey, McCall, Bouchard, and Taubman (1994) reported a replication of the earlier results, this time using both monozygotic and dizygotic twins, not necessarily reared apart. In this type of study, heritability is estimated by comparing the correlations for the MZ twins, who share all genetic components, with the correlations for DZ twins, who on average share only 50% of genetic components. Here Arvey et al. (1994) found results consistent

with the earlier findings but with generally smaller heritability estimates (less than 20%).

In spite of methodological criticisms raised by one of us (Cropanzano & James, 1990) our belief is that Arvey's results suggest that there is some genetic influence on satisfaction (see also Bouchard, Arvey, Keller, & Segal, 1992). However, that effect is apparently small. Even using Arvey's initial estimate, the heritability is not higher than .30 and, given some of the methodological issues raised by Cropanzano and James and also the results from Arvey's own replication, an heritability somewhat lower than .30 is probable.

As it is with personality correlates, simply knowing that there is a genetic component to satisfaction is not the same thing as understanding it. For us, the key question with regard to heritability, as with dispositions generally, is "does this finding enlighten us about the processes involved in job satisfaction?" By themselves, these heritability findings do not offer much in the way of psychological explanation. However, they can point in productive directions, if carefully examined.

One direction, naive in our opinion, would be to search for physiological process explanations to substitute for psychological ones. This would be naive given the small heritability coefficients and the fact that even strong genetic effects typically define a "range of reaction" further influenced by environmental factors. Besides, as Plomin (1990) suggests, it seems likely that genetic effects on behavior are the results of the interactions of many genes making small interactive contributions. Physiological and psychological explanations can certainly complement and enrich each other. However, the history of attempts to baldly substitute physiology for psychology is simply not impressive.

A more useful direction is to search for psychological processes that can incorporate these genetic findings and their likely physiological consequences. What we mean is that future theories can ill afford to ignore these heritability findings. They have to be incorporated into general theories of job satisfaction, but not as boxes labeled "heredity" with arrows pointing to job satisfaction but as signposts pointing the way to appropriate proximal, psychological causes.

AFFECTIVE EVENTS THEORY: AN OVERVIEW

Our own reading of the "signposts" directs us toward affective reactions and we will now present an overview of our position, a position we call Affective Events Theory or AET. Our overview will highlight some of the more important elements of AET, contrasting our position with more traditional positions on job satisfaction along the way. More detailed discussions of the components will constitute the remainder of the paper.

In contrasting Affective Events Theory with traditional theories the first point of departure is that Affective Events Theory focuses on the *structure, causes and consequences of affective experiences at work*. As described earlier, satisfaction is an evaluative judgment made about one's job. While affective experiences may influence that judgment, satisfaction and affect are not equivalent constructs. In its delineation of the factors which influence job satisfaction, Affective Events Theory focuses on affective experiences as a counterbalance to theories which exclusively focus on judgment processes. However, here affective experiences are the more central phenomena of interest with job satisfaction being one consequence.

As a second point of departure, Affective Events Theory directs attention away from features of the environment and towards *events as proximal causes of affective reactions*. Things happen to people in work settings and people often react emotionally to these events. These affective experiences have a direct influence on behaviors and attitudes and the nature of these effects has not been explored. We are not dismissing the relevance of features but we are tentatively suggesting that environmental features influence affect primarily by making affective events (or the recall or imagination of affective events) more or less likely.

Affective Events Theory also adds *time* as an important parameter when examining affect and satisfaction. Research on mood and emotion clearly indicates that affect levels fluctuate over time and that the patterns of these fluctuations are predictable to a great extent. We are proposing that these patterns of affective reactions influence both overall feelings about one's job and discrete behaviors at work.

Paying attention to patterns of affective experience over time is in direct contrast to traditional approaches to job satisfaction in which the time of measurement is given no theoretical importance. In such approaches, satisfaction, as well as indices of predictors and consequences (performance, for example) are assessed at some arbitrary point in time. Ignoring time is consistent with a theoretical position which focuses on the effects of environmental features because such features are considered relatively stable. Unfortunately, this approach ignores the importance of affective variation, a mistake which may contribute to the failure to find affect-performance relationships of any substance.

Finally, Affective Events Theory considers the *structure of affective reactions* as important as the structure of environments. Dimensional structures of job satisfaction focus on dimensions of the attitude object. That is, the job is the object and its dimensions are features like pay or supervision. AET recognizes that affect itself is multidimensional and emphasizes the importance of the structure of the psychological experience. People can feel angry, frustrated, proud or joyful and these different reactions have different behavioral implications.

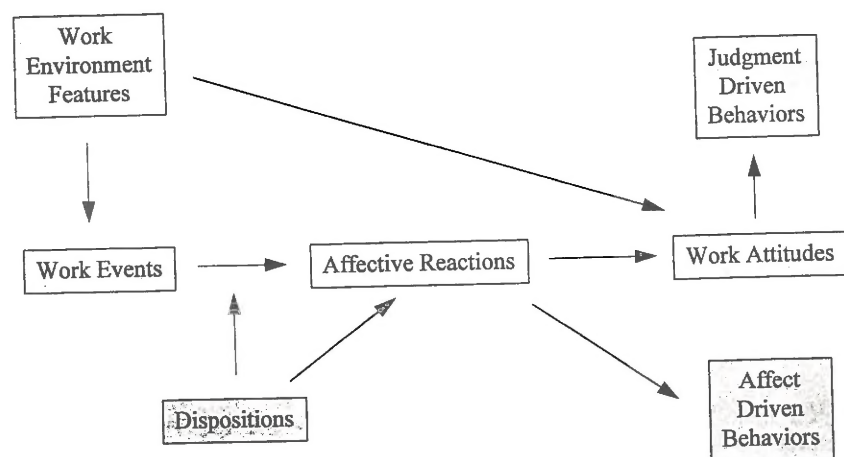


Figure 3. Affective Events Theory: Macro Structure

In Figure 3 we have presented a tentative macro structure to the affective events position. While we will use the remainder of the paper to describe its components in more detail, it seemed useful to begin by walking through the basic elements.

At the core of the position are affective experiences. A key question involves how these experiences are to be described. Moods are different from emotions and emotions, at least, can be described at different levels of differentiation. We will address this question later and will suggest that the appropriate structure depends on the problem being addressed.

Fundamental to the theory is the idea that affect levels fluctuate over time and that the causes of these patterns of affect can be examined in terms of endogenous components, such as known cycles in mood or affective dispositions, and exogenous components, such as affectively relevant events which constitute shocks to existing patterns. Dispositions can also influence the way events produce affective reactions. Work environments are seen as having an indirect influence on affective experience by making certain events, real or imagined, more or less likely.

The consequences of affective experience are both attitudinal and behavioral. Affective experiences have a direct influence on job satisfaction. This influence corresponds to the affective aspect of attitudes. Features have both direct and indirect influences: directly by evaluation in the "cognitive" judgment part of satisfaction and indirectly through their influence on the likelihood of various events. Note, however, that this reference is made to features generally. We are not suggesting that each feature of the work environment has both direct and indirect effects.

Finally, behaviors are grouped into two categories: affect driven behaviors and judgment driven behaviors. Affect driven behaviors follow directly from affective experiences and are not mediated by overall attitudes. They are influenced by processes like coping or mood management or by direct effects of affect on cognitive processing or judgment biases. Judgment driven behaviors are mediated by satisfaction. They are the consequences of decision processes where one's evaluation of one's job is part of the decision matrix.

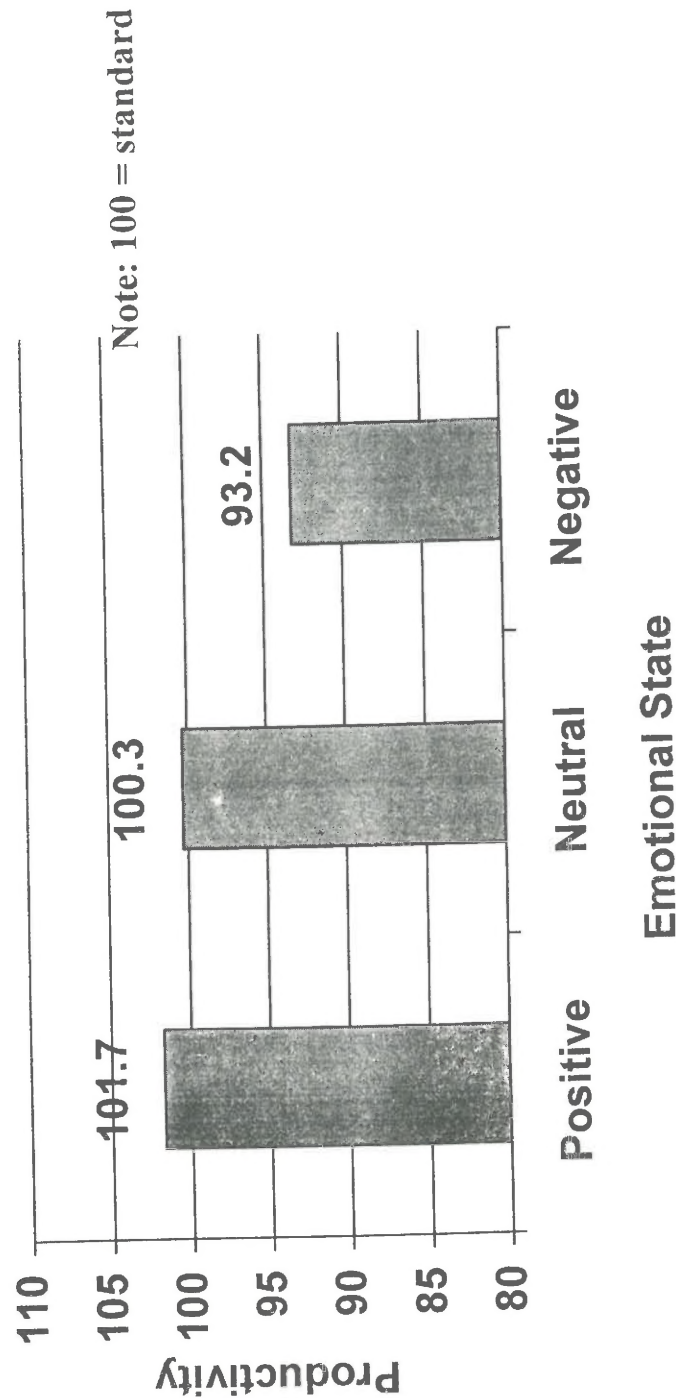
PREVIOUS RESEARCH CONSISTENT WITH AET

While it is obviously tempting to argue that no important research has focused on the role that affective events play in job satisfaction or that affect has been ignored entirely, this would be far from the truth. As we indicated earlier, affective dispositions are currently enjoying some popularity (see Judge, 1992) and the effects of mood on various aspects of work behavior has received some attention (see, for example, George, 1989, 1992). These efforts, however, do not represent attempts to provide coherent theoretical perspectives on the topic. Historically, we believe, two such endeavors are close to what we offer and therefore should be discussed in this paper. Both, by and large, have been forgotten in today's discourse on the topic.

Hersey (1932)

In 1932 Rexford Hersey published his research on *Workers' Emotions in Shop and Home*. Hersey's research is now mostly forgotten yet it still stands as the seminal piece on emotional reactions at work. For one year Hersey intensively studied the emotions and behaviors of 17 skilled workers in two departments of a railroad car and locomotive repair facility of a large public utility. Each man was interviewed four times a day, first for 13 weeks and then for periods of 10 weeks and 13 weeks after periods of eight and four weeks, respectively, during which no measurements took place. The interview was composed of a number of questions including what would today be called a mood checklist (22 items such as happy, hopeful, tense, angry, etc.). Hersey was also able to assess daily productivity as well as individual differences in physical and psychological attributes.

Hersey's general "theoretical" position focused on the concept of life crises. He argued that life, including work life, is filled with a variety of major and minor crises which demand adjustment. The effects of these crises could be seen by examining daily patterns of emotional reactions. While Hersey did not empirically examine this proposition he did obtain some interesting findings with regard to mood and behavior. For our purposes, three findings are of particular interest. First, Hersey was able to chart daily mood levels, scored



Source: Adapted from Hersey (1932).

Figure 4. Relationship Between Productivity and Emotional State

as positive and negative, and document daily fluctuations in affect. Second, by assessing both daily mood levels and daily performance levels he was able to demonstrate a definite relationship between emotional state at work and productivity. Interestingly, this relationship was not symmetrical in that the negative effects of a negative emotional state were much more pronounced than were the positive effects of a positive state (see Figure 4).

Third, without benefit of modern statistical techniques Hersey was able to discern definite mood cycles over the course of the year. These cycles varied across individuals. Different workers had longer or shorter periods to their cycles.

Hersey's research approximately coincided with the Hawthorne studies and with Hoppock's research on job satisfaction. For whatever reasons, it is certainly true that both the Hawthorne and Hoppock studies are mentioned in almost all current Industrial and Organizational Psychology textbooks while Hersey is virtually unknown to today's researchers. Yet it is probably true that Hersey's work could be published intact today (albeit with a little analytical updating) while neither Hawthorne nor Hoppock would withstand current review processes.

Herzberg, Mausner, and Snyderman (1959)

Herzberg maintained that satisfaction and dissatisfaction were not poles of a single continuous dimension but separate and distinct dimensions. The field responded with cries of "methodological artifact," "confusion of agents and events," and "attributional processes." It seems clear that if a modern day Herzberg were to arrive on today's scene with the Two Factor Theory in hand the reactions would be substantially muted. After all, today we have Positive and Negative Affect (Watson & Tellegen, 1985, as discussed later) and Herzberg's dimensions of satisfaction would be perfectly consistent with that particular dimensional organization of mood self-reports.

For our purposes it is useful to note a few relatively unique aspects of Herzberg's work, apart from his Two Factor conceptualization. To begin with, Herzberg understood and emphasized the variability of work attitudes. Using his critical incidents method he asked respondents to "think of a time when you felt especially good or bad about your job." Nothing in this question suggested that people respond in terms of different jobs or that they had to separate these incidents by any particular length of time. In fact, he said that implicit in his new approach is "the notion that job attitudes varied for each individual from one period to another" (p. 13) and that these variations could be linked to variations in diverse criteria.

For Herzberg, the primary causes of these periods of satisfaction or dissatisfaction were specific work events. "I felt terrible when I was passed over for the promotion" (p. 42), "When I finally knew I had the problem licked,

I felt higher than a kite" (p. 42), "A warehouse checker is ordered by his supervisor to go out in the rain and check a group of freight cars" (p. 21). Careful review of these incidents indicate that some of the responses described specific events and others described longer term "situations." Herzberg referred to them all as events but clearly some respondents answered in terms of shorter time frames and described specific occurrences on the job and others answered in terms of longer time frames and described general features of the work situation. However, even these "long range sequences" as Herzberg referred to them, had implicit shorter term events at their core. For example, a salesman describes a long-term situation of frustration but includes in his description that "the boss was too busy to train him and seemed annoyed whenever (he) asked questions" (p. 22); or, as another example, an engineer expresses career frustrations but says that he felt bad because there was a strike going on and management refused to let him participate in the negotiations (p. 22).

Interestingly, while Herzberg described the proximal causes of satisfaction as work events, he did not stay at this level of analysis for long. Instead, he used his events to develop descriptions of environments which facilitated the events (interesting work, possibility for advancement, possibility for growth, etc.) and then kept his focus on these environmental features as he developed his concepts of "motivators" and "hygienes." This focus on features made it easier to incorporate his findings with a need satisfaction approach to satisfaction, specifically Maslow's Hierarchy of Needs (Maslow, 1954). However, a careful reading of Herzberg clearly indicates that in his theory *features operate by making certain events more or less likely.*

If we keep the distinctions between events and features and the distinctions between affective reactions and overall evaluations in mind, the great controversy between one factor and two factor theories of job satisfaction seems rather inconsequential. Our overall evaluation of our job is unidimensional, consistent with a one factor approach. Further, at any given time our current affective state is either positive or negative (Diener & Emmons, 1984) and the affective consequences of work events can be either positive or negative. However, certain kinds of features can be conducive to the occurrence of positive but not negative events and other kinds of features can be conducive to negative events but have little influence on the frequency of positive events. But, again, the construct we refer to as job satisfaction is still a unidimensional evaluation of one's job.

THE NATURE OF EMOTIONS AND MOODS

At this point we will start to examine the elements of AET in more detail. We will begin at the core of the theory, with a discussion of the nature of affective reactions, their definitions and structural representations. This will

be followed, in turn, by discussions of the way events come to elicit affective reactions, what is known about other antecedents of mood and emotion, affective cycles, the influence of affective reactions on job satisfaction and, finally, our ideas about the performance implications of affective reactions.

We should say immediately that the study of emotion has a long history and the literature is enormous and fragmented (see Plutchik, 1994, for an up-to-date summary.) In fact, the scientific study of emotion predates the formal birth of psychology with the writings of Charles Darwin (1872[1965]). Emotion was there, too, at the birth of psychology, as two of psychology's "fathers," William James and Wilhelm Wundt, wrote extensively on the topic.

Our objective cannot be to review all that is known about affect, moods, and emotions. Rather, we hope to summarize those facts and theories which have relevance to work experience. We are intentionally selective without trying to imply that the theories we have chosen to present are the accepted positions in the field. No theory currently meets this criterion.

The objective we do acknowledge is to convince the reader of the validity of the basic structure of our theory, the importance of events, the difference between affect driven and judgment driven behaviors, and so forth and then selectively use the current literature on moods and emotions to fill in the details of the structure while suggesting certain avenues of research. In doing this we recognize that other organizational researchers might accept the overall framework but be guided by different positions in filling in the details.

Defining Emotions

Emotions and moods are both affective states yet rarely have psychologists made explicit attempts to differentiate them. This curious situation is mostly due to the fact that these two types of affective experiences have two different research traditions. The research tradition involving emotions is long and varied. The tradition focusing on moods is shorter and more focused.

Emotions are intuitively well understood yet a definitive definition of emotion has been difficult to come by. The difficulty in developing a definition seems to arise from the observation that an emotional reaction is not one reaction, but a constellation of related reactions. Nonetheless, most definitions seem to settle on a few essential components. We will use Frijda's (1993) summary to introduce these components. According to Frijda, every emotional experience has four main components. To begin with there is the experiential component of affect, "the irreducible aspect that gives feelings their emotional, noncognitive character" (p. 383). Next, Frijda argues, a person is generally not aware of feeling good or bad but rather one is aware of the pleasantness or unpleasantness of the eliciting event and therefore the experience of affect is intricately tied to the appraisal of that event. Most definitions of emotions

include the idea that there is an overall affective experience and a consequent cognitive appraisal process (Plutchik, 1994). Third, for Frijda and for most theorists, emotions are also characterized by a wide variety of physiological bodily changes. Finally, Frijda suggests that the experience of an emotion includes an action readiness, a general readiness to deal with the environment through increased arousal and vigilance.

Implicit in all definitions is that an emotion is a reaction to an event. It is not a trait, although there can be trait differences in chronic affect levels or in reactivity to specific events. Also implicit in all definitions is that emotions have event or object specificity. As Frijda (1993) says "Emotions have an object, they are about something... One is happy about something, angry at someone, afraid of something" (p. 381). Finally, even when one acknowledges the multiple components of the emotional experience (affect, physiology, etc.) it is the *experience* that remains fundamental.

Defining Moods

Frijda (1993) and Morris (1989) both tell us that moods are most frequently distinguished from emotions by three features: intensity, duration, and diffuseness. More specifically, moods, as compared to emotions, are thought to be less intense, of longer duration and lack specificity with regard to a particular object or behavioral response.

Frijda (1993) and Morris (1989) also tell us that the first two criteria are not very useful. To begin with, moods can vary greatly in their duration. One often thinks of moods lasting for hours or even days, yet mood manipulations in the laboratory can last less than a few minutes and still have the effects attributed to real mood experiences. Emotions, on the other hand, can last for long periods of time. In addition, diffuse affective states like anxiety or depression can be of very high intensity while specific emotional reactions can be rather mild.

Frijda (1993) and Morris (1989) conclude that the real distinguishing feature between moods and emotions is diffuseness in terms of both object and response. Emotions are affective states directed at someone or something (Frijda, 1993). Moods, on the other hand, lack an object to which the affect is directed. Lazarus (1991a) makes a similar point when he says that moods are vague and "lack a contextual provocation."

None of these authors are suggesting that moods do not have specific causal antecedents, only that the phenomenal experience of the mood does not include the causal factor. The importance of the experiential disconnection between the affect state and its cause is further emphasized in Frijda's (1993) suggestion that an emotion turns into a mood when one loses the focus on the precipitating event or object. Similarly, making the cause of the mood salient may transform a mood into a weak emotion. This latter position is consistent with research

which demonstrates that when people are made aware of the cause of their mood state many of the global effects of mood are eliminated (Clore, 1992).

Mood researchers also argue that moods, more than emotions, are diffuse in terms of elicited responses in that they influence a wide variety of cognitive and behavioral responses which are not connected to the original source of the mood (Isen, 1984; Morris, 1989). Obviously, we agree with the argument that moods have diverse effects but we would caution that this distinction between mood and emotion can be taken too far. While it is true that the effects of emotions tend to be more targeted toward dealing with either the source of the emotion or the emotional state, they too can have generalized behavioral effects mediated by activation or arousal levels. In addition, many of the global effects of moods may result from rather specific attempts to manage one's subjective state. This being said, it still remains that the effects of mood tend to be less dependent on the nature of the cause of the mood. This is consistent with the idea that the cause is not part of the phenomenal experience.

The Structure of Emotions

Researchers on moods and emotions have spent a good amount of time and energy trying to dimensionalize, classify and categorize these two types of affective responses. In this section and the next we will present a summary of these efforts. It is our observation that the dimensionalization or categorization objectives of emotion researchers appears to be quite different from the objectives of psychologists who study mood. From the beginning, emotion researchers have been interested in categorization, developing lists of primary emotions. Even those researchers who criticize the idea that there are so called "basic" emotions provide lists of emotions or emotion families (e.g., anger, love, frustration, joy, etc.). Mood researchers, on the other hand, seem to be less interested in the phenomenal experience of discrete moods and more interested in reducing the mood experience to its underlying dimensions (e.g., pleasantness, intensity, etc.). While this difference may be the result of historical accident, it certainly is consistent with the differences between the affective experiences of moods and emotions. Mood is affect disconnected from its causal object. As such, the specificity of a mood may have fewer behavioral implications than its position on some underlying dimensions. Emotions, on the other hand, are object oriented and the object, causal circumstances and specific emotional reaction are therefore important for understanding and predicting responses.

Intuition tells us that there are many different kinds of emotions, each of which involves a unique phenomenological experience, with different consequences for individuals and their employing organizations. As a result of this diversity, researchers have found a need for some structure to act as a guide for future research. The problem with emotions, however, is not a lack

of structure but, instead, a surfeit of perspectives, points-of-view, and theoretical models. We have more structures than we could possibly use. There are many different frameworks each based on the needs of particular researchers (Lazarus, 1991a). Consequently, there is no one structure on which everyone agrees (Ortony & Turner, 1990).

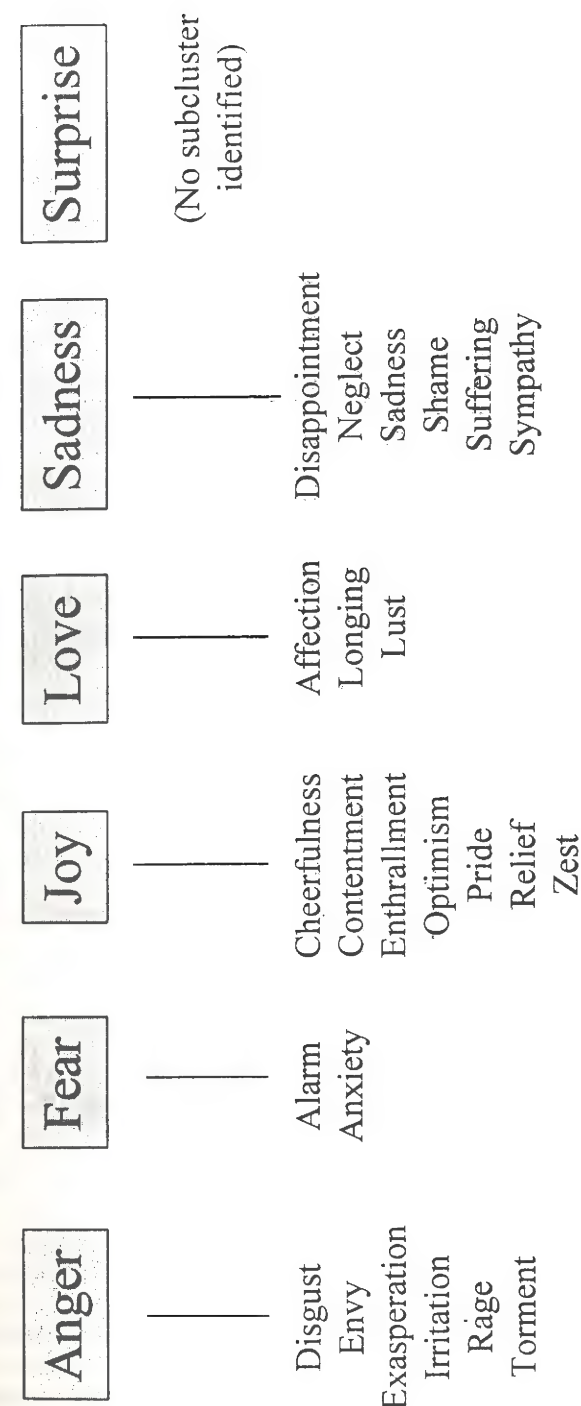
Plutchik (1994) has recently reviewed attempts to develop lists of "basic" emotions. He points out that this is not a new endeavor. Descartes and Spinoza both proposed emotional classification schemes as philosophers attempted to wrestle with the "passions" of humankind. All emotional positions, whether they arise from an evolutionary perspective, a cognitive perspective, or a psychoanalytic perspective have attempted to summarize the multitude of ways we refer to emotions. Inherent in all of these attempts is a distinction between primary and secondary emotions. Primary emotions refer to fundamental or basic emotions and secondary emotions are emotional states derived from a combination these primary emotions. This distinction is designed to summarize the variety of emotional reactions and still retain the nuances among the many different emotions we experience and can recognize in others.

Emotional researchers from an evolutionary perspective tend to look for evidence of primary emotions in displays of common emotions across cultures and also in similar displays of emotions among different species, particularly humans and primates. This last approach is traceable to Darwin's work in *The Expression of Emotions in Man and Animals* (1872[1965]).

Ekman (1992) recently applied these biological criteria to various emotion lists and concluded that there are at least six basic emotions: anger, fear, sadness, enjoyment disgust and surprise. Plutchik (1994) also working from the evolutionary perspective, offers the following eight basic emotions: joy, sadness, acceptance, disgust, fear, anger, expectation and surprise. Izard (1977), following a more physiological approach, offers fear, anger, enjoyment, interest, disgust, surprise, shame, contempt, distress, guilt.

Research by Shaver, Schwartz, Kirson, and O'Connor (1987) represents a semantic classification to reduce the wide variety of experienced emotions to a few categories (see Figure 5). This approach uses the semantic similarity of emotion words to develop categories of emotions. Shaver and his colleagues had a group of subjects rate 213 words with respect to their "emotionness." These ratings were then subjected to cluster analysis. Subjects identified six categories of emotions: love, joy, surprise, anger, sadness, and fear. These six primary categories were then meaningfully subdivided into 24 subcategories. Eventually, all 213 words could be classified using either the 24 subcategories or the 6 primary categories.

The Shaver et al. structure is intuitively meaningful but it is unclear what the semantic analysis has to say about the structure of actual emotions. It may be true that the cognitions pertaining to emotion words can be hierarchically organized but even Shaver et al. are cautious in their willingness to extrapolate



Source: Adapted from Shaver, Schwartz, Kirson, and O'Connor (1987).

Figure 5. Semantic Organization of Emotion Words

to actual emotion categories. However, one cannot help notice the degree of overlap between the Ekman, Izard, Plutchik, and Shaver lists.

Finally, we should point out that for many researchers in the cognitive appraisal tradition, the search for "basic" emotions is of little value. Ortony, Clore, and Collins (1988) regard such a search as unprofitable because, in their opinion, there is no way to choose among lists. Their approach, like other cognitive appraisal theorists, argues for sets of relatively independent emotion categories or families based on common appraisal processes. We will have more to say about this appraisal process later. Here we will only point out that these appraisal theorists still present various lists of emotions (Clore et al. talk about such things as joy, pride, shame, distress, love, hate, etc.) as the end product of the appraisal process.

Implications for Affective Events Theory

Applied psychologists are going have to await more research before the issue of basic emotions is completely resolved. However, work to date has already given us sufficient grounding to proceed.

First, all researchers agree that emotions can be plausibly organized into families. These categories can provide a guiding foundation for future research. A short list of these families would at least include anger, disgust, joy, fear, and sadness. It might also include surprise. It should be noted that this list is based on convergence between evolutionary and cognitive appraisal research. These particular emotional states seem to show up time and time again—regardless of the empirical paradigm. Consequently, at least these six emotional families, and possibly some others, should receive future research attention.

Second, everyone concurs that specific emotional states do exist. In fact, these states include some of our most memorable experiences, including jubilation, loathing, grief, and terror. In every major theory, these specific emotions are brought about by the action of cognitive appraisals. Interestingly, appraisals are even central to theories of basic emotion. However, basic emotion theorists generally see the appraisals as automatic, rapid, and hardwired (Ekman, 1992). Regardless, for a person to experience an emotion some event in the individual's environment has to be appraised. Ultimately, appraisals involve events—in the broad sense of the word—including people and things. Consequently, it follows that any theory of emotion must also be a theory of how people adapt to events in their environment.

Third, some emotion terms seem to be more specific, whereas others are more general. It is not clear whether or not the general emotions are shaped into the specific ones. However, it is clear that some words refer to broader states than do others. For example, we usually regret some loss that happened in the past. However, we can be sad about some loss that did happen or that will happen. Sadness is more general with respect to time. Likewise, fear can

refer to either a very intense or a mild emotional state, whereas the term horror is generally reserved for something very intense. Fear is more general with respect to intensity.

This has implications for the prediction of behavior. It seems likely that specific emotions will prove especially useful for the prediction of specific behaviors. Consider, for example, the emotion of sadness. How would a sad person behave at work? That might depend on the specific variant of sadness being experienced. A person who was disappointed over something might behave one way. A person who felt guilty might behave another. Pity would likely lead to the prediction of a third set of responses. According to Shaver and his colleagues, disappointment, guilt, and pity are all part of the sadness family. People experiencing any of these three specific emotions might all describe themselves as sad. However, in each instance very different behaviors are apt to result.

In spite of the difficulty of the task, organizational researchers cannot be deterred from borrowing or developing classification schemes for describing emotional reactions at work. If one assumes that discrete emotions have limited and specific action tendencies, an assumption held by most emotion researchers (see, e.g., Lazarus, 1991a), then a full understanding of the behavioral implications of emotional reactions at work requires the use of some classification scheme. We believe that ultimately the environment-emotion-behavior chain will include a situation-emotion matrix that presents the key situational features which are conducive to specific emotional reactions. It seems to us that at the very least the analysis of the structure of work emotions is as important as the analysis of the dimensions of job satisfaction.

The Structure of Mood

So far we have been discussing mood as if it were a single thing. However, experience tells us otherwise. Intuitively, when we describe our mood we tend to do so in terms of two words: "good" and "bad." In psychological jargon, we might say that people articulate their feelings with reference to hedonic tone, "positive" for "good" and "negative" for "bad." We also categorize our moods in terms of their intensity. We can say, for example, that we feel "okay" or "very good." Both are generally positive, but the latter is more so.

Researchers, of course, attempt to describe mood more systematically and, as we have said, mood researchers have been particularly concerned with reducing the mood experience to underlying dimensions. The most common paradigm for doing this task has been to administer a large number of mood items to a group of respondents. These responses are then subjected to a dimensional analysis (cluster analysis, factor analysis, etc.) (Mayer & Gaschke, 1988; Watson & Tellegen, 1985). The obtained factors/clusters are taken to indicate the underlying dimensional structure of mood. Although this and

similar paradigms are widely used, the dimensions obtained vary somewhat among researchers. In general, two different two-dimensional structures have received wide currency. One structure, frequently adopted in the organizational sciences, conceptualizes mood in terms of Positive Affectivity (PA) and Negative Affectivity (NA). Another widely discussed structure, less frequently used in organizational research, dimensionalizes mood states in terms of Hedonic Tone (with positive and negative affect as anchors on a single continuum) and Intensity. The evidence for each of these models is reviewed below.

Positive and Negative Affectivity

The empirical literature on state and trait mood has been extensively reviewed by Watson and Clark (1984) and Watson and Tellegen (1985). According to these authors, both state and trait mood can be best represented in terms of two distinct dimensions: Positive Affectivity (basically good feelings) and Negative Affectivity (basically bad feelings). At the high pole, PA is characterized by such adjectives as "energetic," "exhilaration," and "joy." People who report high positive affectivity exhibit a zest for living. At the low end, however, low PA is not the presence of negative affect. Rather, the low pole is characterized by the absence of positive affect. Individuals scoring low on PA are best seen as apathetic and listless. NA manifests itself in a different complex of feeling states. People score high on NA when they report anger, nervousness, anxiety, guilt, sorrow, and so on. At the low pole, NA does not involve the presence of positive affect. Rather, it involves the absence of negative affect. In this sense, it functions in a manner analogous to PA. Individuals scoring low on NA often report being placid and content.

Seminal work on this NA/PA model of mood was conducted by Zevon and Tellegen (1982). These researchers had 23 subjects fill out the same mood adjective checklist for 60 consecutive days. Afterwards, they conducted 23 within subjects factor analyses. For 21 of the 23 individuals, two strong and independent factors emerged, one characterized by positive affect and the other by negative affect. These data provided clear support for the PA/NA model.

Since the initial work of Zevon and Tellegen (1982), several others studies have uncovered the two basic PA and NA dimensions (e.g., Gotlib & Meyer, 1986; Watson & Clark, 1991; Watson, Clark, & Carey, 1988; Watson, Clark, & Tellegen, 1988; Watson & Tellegen, 1985). For example, one representative study was reported by Watson (1988). In this study 80 undergraduate students were administered a daily mood checklist for 6-8 weeks. These mood reports were than factor analyzed and the PA and NA dimensions were again recovered. Watson (1988) also reported that social activity and exercise were most strongly related to PA, while perceived stress was strongly related to NA. Physical symptom reports were related to both NA and PA.

Although still limited, cross-cultural investigations have also produced consistent findings. For example, using a method similar to the one reported above, Watson, Clark, and Tellegen (1984) uncovered the same two factor structures in a sample of Japanese citizens. Similar results were also obtained in another cross-cultural study by Almagor and Ben-Porath (1989).

The NA/PA model of mood structure has been extremely influential within the organizational sciences (see George, 1992, for a review). Nevertheless, it is not the only useful way for dimensionalizing mood states. A second model has also obtained a great deal of empirical support. It is to this alternative approach that we now turn.

Hedonic Tone and Intensity

As with NA/PA model, various researchers have argued that mood can be thought of as involving two dimensions but have proposed a different set of dimensions (for reviews see Larsen & Diener, 1992; Russell, 1979). The first dimension of this alternative structure is sometimes referred to as Hedonic Tone and other times as Pleasantness. The Hedonic Tone or Pleasantness dimension describes mood states as falling on a scale from very positive to very negative with many points in between. The positive pole of this Hedonic Tone dimension would include such things as "happy" and "carefree," while the low pole would be characterized by such markers as "sober" and "distressed." Note that this is a single bi-polar continuum.

The second dimension in this alternative structure is the level of intensity. That is, feelings can range from very intense to very mild. So, for example, we can see the high end as including such adjectives as "restless" and "changeable," while the low end is characterized by such adjectives as "controlled" and "peaceful."

As with NA and PA, the Hedonic Tone and Intensity structure has received empirical support. Much of this support comes from the work of Russell and his colleagues who have found evidence for two broad dimensions that he calls "Degree of Arousal" and "Pleasantness-Unpleasantness" (e.g., Russell, 1978, 1979; Russell & Mehrabian, 1977; Russell & Ridgeway, 1983).

Why the Confusion Over Factor Structures?

At first glance the two previous sections appear to completely contradict one another but, in fact, it is possible that both models can provide a good mathematical fit to the data. To understand why this is so one needs to consider that the NA/PA and Hedonic Tone/Intensity solutions have in common the fact that each describes mood in terms of two orthogonal factors. Both models provide a simplified representation of a more complex reality. Let us look at this in more detail.

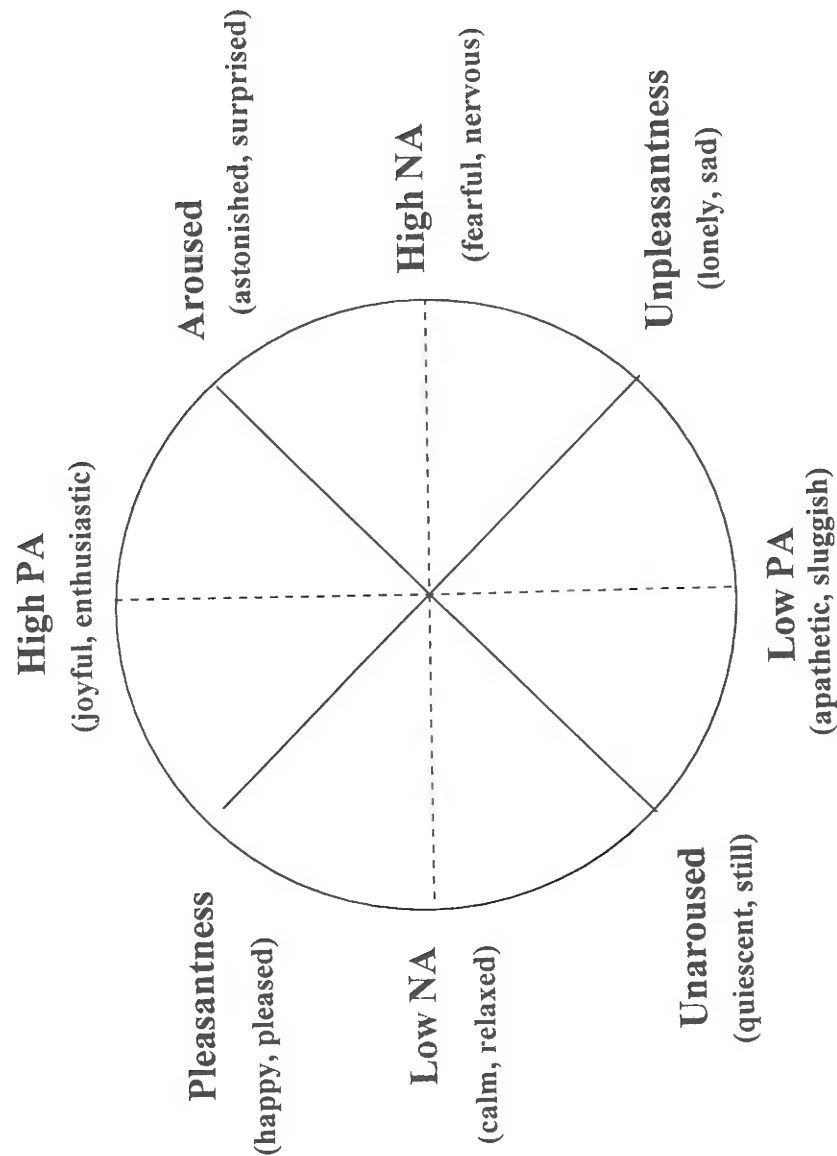


Figure 6. Circumplex Model of Mood

Several authors have noted that when words referring to mood are judged in terms of similarity, the relationships among the words can be visually depicted in terms of a circular or "circumplex" model (see Figure 6) (Larsen & Diener, 1992; Mayer & Gaschke, 1988; Meyer & Shack, 1989; Russell, 1980; Watson & Tellegen, 1985).

What is especially important for our purposes is how one might represent this circumplex in two-dimensional space. Given the circular relationship among the words, multiple two-dimensional structures are possible. As shown in Figure 6, the two structures we have been discussing are simply different axis rotations of the same data. Both summarize the relationships equally well in that both structures can be used to precisely locate a given mood in the dimensional space.

Because, mathematically speaking, both models generally fit the observed data the value of either approach cannot be decided on mathematical grounds alone. Rather, the worth of either solution becomes, not so much a matter of truth, as a matter of methodological and theoretical clarity. Consequently, both "camps" have looked to other evidence to make the case for their preferred structures. We will review some of these arguments.

Robustness Across Multiple Operations

As we have seen, both the NA/PA and the Hedonic Tone/Intensity dimensions have been recovered from factor analytic studies of survey responses. However, the Hedonic Tone/Intensity model has been demonstrated with other paradigms as well. For example, much of the work of Russell and his colleagues has used multi-dimensional scaling techniques (e.g., Russell, 1979; Russell & Ridgeway, 1983). Similarly, the Hedonic Tone/Intensity solution also shows up when pictures and not words are used as stimulus materials (Russell, Lewicka, & Niit, 1989). Conversely, evidence for the NA/PA model has been limited to factor analytic research on verbal scales.

Conceptual Descriptions

There has been some conceptual ambiguity regarding the two dimensions of NA and PA that is relevant to choosing an appropriate dimensional structure. Essentially, most adjectives that load on either NA or PA describe only the high pole for each adjective. Take, for example, the case of the Positive and Negative Affectivity Schedule (or PANAS, see Watson, Clark, & Tellegen, 1988). The PANAS is probably the most widely used measure of PA and NA. The schedule was constructed by using exploratory factor analysis to identify items with high loadings on one dimension (either NA or PA) and low loadings on the other. Interestingly, this procedure left the scale's authors with only items

indicative of high positive affect (such as "energetic") or high negative affect (such as "anxious").

Other factor analytic research has also produced mixed results. On the supportive side, Mayer and Gaschke (1988) report that "drowsy" and "tired" had a highly negative ($-.39$ and $-.36$, respectively) loading on PA and very low loadings on NA ($-.04$ and $-.09$, respectively). Similarly, "calm" was adequately loading on NA ($-.59$) and had a low loading on PA ($.06$). The results for "content" were less definitive but still supportive. "Content" had a lower loading on PA ($.39$) than NA ($-.43$). In the Mayer and Gaschke (1988) study, therefore, there were at least a few clean markers of low PA and low NA.

However, not all of the research has been this supportive. In one study, Meyer and Shack (1989) collected self-ratings on a variety of different mood adjectives. These data were then factor analyzed and subjected to a varimax rotation. Theoretically speaking, several adjectives would seem to have been good markers for low NA, including such things as "relaxed," "calm," "pleased," "content," "satisfied," "quiet," and "still." However, none of these items produced clear results. Most contained similar loadings on both NA and PA. In fact, "pleased," "content," "satisfied," "quiet" all had higher absolute loadings on PA than they did on NA. Of the remaining three that had higher loadings on NA, the clearest solution was for "calm," which loaded $-.27$ on NA and $.19$ on PA. Thus, "calm" was the only reasonable marker of low NA while it was also more or less independent of PA. Of course, $-.27$ is not a decisive loading.

Similar results were obtained for Meyer and Shack's low PA adjectives. Four items seemed to be good candidates for low PA: "sluggish," "drowsy," "sleepy," and "quiet." However, the first three of these adjectives all had higher (positive) absolute loadings on NA. That is to say, they were better markers of high negative affect than they were of low positive affect. In fact, the item that came closest to being a clean marker of low PA was "quiet." It had a $-.31$ loading on PA and a $.26$ loading on NA. Every other item with a negative loading on PA had a higher (and positive) loading on the NA dimension. Put differently, there were no clear indices of low PA.

NA and PA may be more independent at the high pole than at the low pole. This phenomenon has long been known. For example, Zevon and Tellegen (1982, p. 112) maintained that NA and PA were "descriptively bipolar but affectively unipolar dimensions." To state the matter differently, NA and PA seem only to be independent constructs at the high end of their poles.

What this means theoretically has yet to be fully articulated. It is difficult to understand a dimension that is one thing on the low end and two things on the high. Certainly, this makes the NA/PA model more difficult to interpret, as most constructs have two poles, not one. The Hedonic Tone/Intensity model avoids these concerns. Hedonic Tone and Affect Intensity are (at least in

principle) orthogonal at both the high and low poles. Thus, understanding this structure is more straightforward.

The Issue of Error Variance

A series of studies by Green, Goldman, and Salovey (1993) is also problematic for the NA/PA model of mood. These authors conducted confirmatory factor analyses of various mood adjectives. They found that when measurement error was taken into account, the two factor NA/PA model provided a poor fit to the data. A better fitting model involved a single bipolar dimension of mood, with PA and NA fitting as opposite ends of this continuum. This bi-polar dimension, of course, is similar to the factor of Hedonic Tone. Similar arguments have been made by Russell (1979).

The Issue of Time Frame

As noted above, it has been argued that NA and PA are basic dimensions of both state and trait mood (Watson, 1988). However, some research suggests that the structure of mood may vary based upon the time perspective taken by the respondent. For example, studies by Diener and Emmons (1984) and Diener and Iran-Nejad (1986) were able to replicate the independent NA and PA dimensions only when individuals were asked to describe their mood in general. When subjects were asked to describe their current mood state (as opposed to their general predispositions), negative and positive affect exhibited a significant, negative correlation. Diener and his colleagues argued that it is difficult to feel both good and bad *at the exact same time*. If this is so, then NA and PA might be useful personality dimensions, but less useful as dimensions of state mood.

It should be emphasized that not all of the data are consistent. For example, Watson (1988) and Mayer and Gaschke (1988) were able to recover the NA/PA factor structure with judgments of one's present mood. The point here is that the NA/PA structure is only inconsistently obtained with ratings of current mood, while the Hedonic Tone/Intensity structure seems to be more stable. It would seem that the more stable factor structure is likely to be the more useful one.

Other evidence seems to suggest that people tend not to experience both types of affect simultaneously. Experimental and field evidence presented by Baron (1976, 1984) suggests that when incompatible mood states exist the stronger one tends to cancel the weaker. Baron (1976, 1984), in fact, has found that these incompatible responses are a useful tool for conflict management.

Once again, we should emphasize that independent mood states do not necessarily imply independent mood traits. Personality dispositions to experience moods may well be interdependent. This is a separate empirical

question. Our concern here is with mood states. Both experimental (Baron, 1984) and correlational (Baron, 1976; Diener & Emmons, 1984; Diener & Iran-Nejad, 1986) evidence suggests that individuals experiencing a positive mood state will not be experiencing a negative one. Thus, when mood is assessed as a state, there is at least some evidence that NA and PA are (negatively) correlated. This would suggest the greater usefulness of an Hedonic Tone/Intensity Structure over the NA/PA structure.

Integration With Other Research

Watson and Clark (1984), recognizing the inability to choose between the two structures on mathematical grounds, argued that a more informed choice could be made by looking at the way in which the two structures fit with other relevant literature. The NA/PA model clearly has some strengths in this regard. As noted by Watson and Clark (1984), Watson (1988) and Watson, Clark, and Tellegen (1988), the same NA/PA factor structure can be used to describe both state and trait mood. NA corresponds to the personality dimension of Neuroticism and PA to the dimension of Extraversion. Thus, the use of the NA/PA solution allows for a clear connection between states and traits. On the other hand, as Larsen and Diener (1987) have shown, very similar links can also be established between Hedonic Tone/Intensity and other personality dimensions such as Affect Intensity. Similarly, the Hedonic Tone/Intensity model is also consistent with much research on attitudes (Osgood, Suci, & Tannenbaum, 1957). Consequently, the advantages of either structure using this criterion are unclear.

For purposes of Affective Events Theory, there is at least one respect in which the Hedonic Tone/Intensity model might be more useful. It is our belief that a common structure for moods and emotions would be advantageous and that the Hedonic Tone/Intensity structure better fits that bill. As we will describe in the next section, emotional states result from a two stage appraisal process (Frijda, 1986; Lazarus, 1991a, 1991b). The first part of the appraisal involves an assessment of the "goodness" or "badness" of the event, as well as an assessment of the event's importance. Appraisals of "goodness" lead to positive affective states, the intensity of which is relatively high for important events and relatively low for unimportant events. Similarly, appraisals of "badness" lead to negative affective states, whose intensity is likewise modulated by importance. We shall have more to say about emotion formation later. For now it should suffice to indicate how closely the appraisal of "good-bad" corresponds to Hedonic Tone, while the appraisal of "important-unimportant" impacts intensity. The observations suggest that the Hedonic Tone/Intensity model might be more parsimonious and more easily integrated with various theories of emotion.

THE EFFECTS OF EVENTS ON EMOTION AND MOOD

Emotion Generating Events

Our theory gives primary emphasis to the role of events as proximal causes of affective reactions and then as more distal causes of behaviors and attitudes through affective mediation. Consequently, at this point we feel obligated to discuss what we mean by event. This obligation is easily met because we mean nothing more than what the word event means in ordinary language. The World Book Dictionary gives the primary definition of event as "a happening, especially an important happening." The Random House Dictionary goes on to add "something that occurs in a certain place during a particular period of time." Implied in both of these definitions is the idea of change, a change in circumstances, a change in what one is currently experiencing.

Some, but by no means all, events have affective significance in that they generate an emotional reaction or mood change in people. It is these changes that we need to focus on. To do so requires that we try to answer at least two questions. First, what kinds of changes have affective significance? Second, how do specific representations of events eventuate in the experience of specific emotions?

It turns out that these two questions correspond nicely to a two stage appraisal process advocated by most cognitively oriented emotion researchers (Lazarus, 1991a, 1991b; Ortony, Clore, & Collins, 1988; Roseman, 1984; Smith & Ellsworth, 1987; Stein, Tribasso, & Liwag, 1993). We present an overview of the common elements of their theories to describe the processes involved when events elicit emotional reactions. We should say from the outset that emotion theories come in many different forms. Plutchik (1994) has described four different categories: motivational theories, psychoanalytic theories, evolutionary theories, and the cognitive theories which we focus on. All theories assume that emotional reactions generally begin with an appraisal of an event (Plutchik, 1994); however, cognitive theories focus their attention on just this point. Because this is the issue we need to focus upon, we feel that the cognitive theories have more to say to us. However, we invite our readers to examine other mediators of event-emotion relationships.

There appears to be a common emotion elicitation process at the core of all cognitive appraisal theories. This process begins with an event which is initially evaluated for relevance to well being in simple positive or negative terms. This initial evaluation also contains an importance evaluation which influences the intensity of the emotional reaction. Initial appraisal leads to further, more specific, appraisal of context focusing on consequences, attributions, coping potential, and so forth. While different theorists offer different appraisal dimensions, all suggest that it is this secondary level of appraisal which results in the experience of discrete emotions like anger, sadness, or joy.

Primary Appraisal

Initial or primary appraisal appears based on "concern relevance" (Frijda, 1993), relevance to well being. Just what does this mean? Most theorists suggest that concern relevance is intricately tied to one's personal set of goals and values. Lazarus (1991a) is very specific when he says that "harms or benefits depend on goal commitments which reside in the person and are either thwarted or facilitated by the behavior of the environment" (p. 92). He concludes that initial appraisal involves an assessment of "goal relevance," does the event touch on some issue of personal desire or concern, and "goal congruence," is the event consistent (beneficial) or inconsistent (harmful) with those desires or concerns. Similar positions are offered by Ortony, Clore, and Collins (1988), Frijda (1993), Stein, Trabasso, and Liwag (1993), among others. Recently, Berkowitz (1989) has reformulated the classic frustration-aggression theory of Dollard, Doob, Miller, Mowrer, and Sears (1939) in these terms, concluding that frustration is a blockage of goal gratification and the aggression effect is mediated by negative affective responses.

In addition, theorists who argue that goal relevance is essential to the emotional reactions to events generally add that the intensity of the emotion is directly correlated with the importance or desirability of the goal. Ortony, Clore, and Collins (1988) add other variables which influence the intensity of the emotional reaction to an event, including unexpectedness and existing arousal levels.

Although both positive and negative goal relevant events can occur, producing positive and negative emotional reactions, respectively, Taylor (1991) reviews evidence which suggests that the effects of positive and negative events are not symmetrical. More specifically, she concludes that negative events produce stronger reactions than do positive events. Although the research which examines this issue suffers from the difficulty of equating event strength, the body of the work suggests that negative events produce stronger physiological responses and stronger subjective feelings of affect.

The connection between the goal relevance involved in general emotional appraisals and the motivational and affective consequences of work goals is obvious. Locke and Latham (1990) have provided a useful discussion of the relationship between work goals and affective reactions and we will add only a few points relevant to emotional appraisal. First, the type of goals relevant to emotional appraisal go well beyond the performance goals which form the core of organizational study in this area. People have a wide variety of goals and objectives. These preferred states can be what people strive for, what they seek to avoid, what they hope to maintain, what they want to see occur, and so forth (Cropanzano, James, & Konovsky, 1993). All are relevant to emotional appraisal.

Second, in agreement with most cognitive appraisal theorists (Lazarus, 1991a; Ortony, Clore, & Collins, 1988; Stein, Trabasso, & Liwag, 1993) we assume that goals are hierarchically organized (cf. Cropanzano et al., 1993). People have broad, distal goals as well as proximal subgoals which are instrumental to the attainment of these higher level objectives. In addition, the goal-subgoal connections within hierarchy structures can be described with different types of instrumentality. Some subgoals are necessary but not sufficient for the attainment of broader objectives, as, for example, the instrumentality of a college degree for professional success. Some subgoals are sufficient but not necessary for the attainment of broader objectives, as, for example, winning the lottery as a way of achieving wealth. We expect that the importance of any particular goal, and therefore the intensity of emotional arousal, is influenced by the position of the event implicated goal in the hierarchy and well as the nature of the instrumental relationship with other goals. For example, it might be that the failure to obtain a necessary but not sufficient goal may have greater negative implications than the actual achievement of that goal has positive emotional implications. Similarly, meeting a sufficient but necessary goal may have greater positive emotional significance than the failure to meet that goal would have negative significance.

Third, people can and do focus on different elements of their goal structures at any particular time. It is logical to assume, therefore, that goal attention influences the reaction to specific events.

We wish to make one last point on this issue of goals and emotional appraisal. After reading what we have written about the nature of emotional appraisal, one might argue that the appraisal of the goal significance of events greatly resembles the process of standard comparison which we ascribed to the Cognitive Judgment approach. The similarity is not lost on us, but we must point to some important differences. To begin with, our focus here is on the formation of discrete emotional reactions not general evaluations. Second, our focus is on the appraisal of the emotional significance of an event, not the goal significance of a feature of the environment. Third, with regard to emotional experiences, goal significance is just the beginning of the full appraisal process. This all being said, one fundamental point of similarity remains and that is the ubiquity of goals as frame of reference for evaluating one's personal state of affairs.

Secondary Appraisal

All cognitive appraisal theorists argue that primary appraisal is followed by a secondary appraisal, an interpretive "meaning analysis" (Smith & Pope, 1992) in which specific cues from the environment and the person are evaluated and discrete emotional responses elicited. Where the theories differ is in the specific dimensions they propose as relevant to the appraisal process. So, for example,

Smith and Ellsworth (1985) proposed that emotional events are appraised in terms of five dimensions: pleasantness, certainty, self vs. other agency, attentional direction (toward or away from), and effort needed to deal with the event. Roseman (1984) proposed that events are appraised in terms of whether the situational state is consistent or inconsistent with motives, certainty of outcome, agency, motivational state (consistent with a positive or negative motive), and coping potential. Lazarus (1991a) offered blame or credit (who is responsible), coping potential and future expectancy of the situation improving or getting worse as the key appraisal dimensions. Other dimensional structures have been offered by Frijda (1987), Ortony, Clore, and Collins (1988), and Scherer (1984) among others.

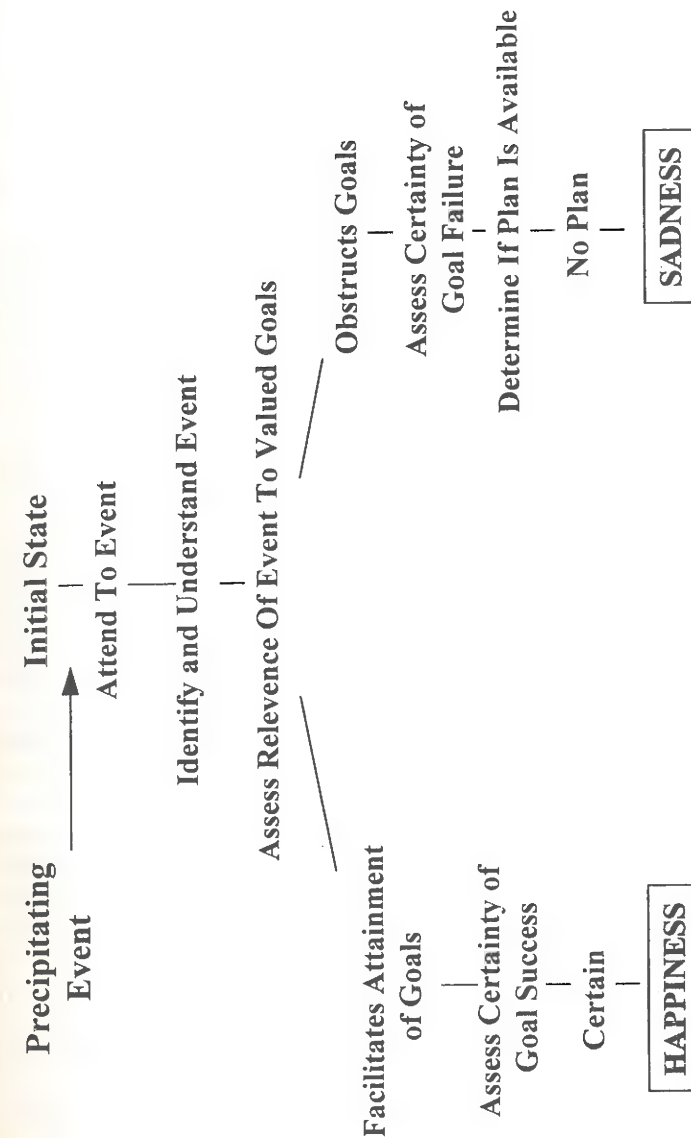
Although most appraisal theories do not specify any particular sequence to secondary appraisal, essential elements of the process can be captured by using a decision tree as a model. Figure 7 illustrates this using the configuration set forth by Stein, Trabasso, and Liwag (1993). We use this configuration as an example, without endorsing this dimensional structure over any other.

Research on the validity of this appraisal process can be illustrated by a recent study by Roseman, Spindel, and Jose (1990). They asked subjects to recall events for 16 specific emotions and then to respond to a set of appraisal questions for each. They showed that the responses to the appraisal questions were able to differentiate among the specific emotions. Other studies done by Weiner (1985), Smith and Ellsworth (1985), and Frijda (1989), among others, have generally supported each researcher's conception of appraisal dimensions, although no definitive conclusion about the usefulness of one configuration over another can yet be made.

Mood Generating Events

There exists quite a substantial empirical literature which speaks to the antecedents of moods. Interestingly, this literature exists primarily as a catalogue of mood manipulations in studies conducted to examine some hypothesis about mood effects. Most of these manipulations seem rather intuitive and ad hoc, allowing for little to be gleaned about their underlying conceptual similarities. Theoretical discussions of the antecedents of mood have been far less frequent than have similar discussions about the antecedents of emotions. All this is meant to indicate that there is much less to say about the antecedents of mood than there was to say about the antecedents of emotion.

Nonetheless, Morris (1989) has contributed a useful discussion of this topic which we will summarize. He suggests that there are four positions on the sources of experienced moods. Position 1 states that moods are the result of mildly positive or mildly negative events. This is the position which guides most of the laboratory research on the effects of moods. Indeed, experimental studies



Source: Adapted from Stein, Trabasso, and Liwag (1993).

Figure 7. Appraisal Flow for Happiness and Sadness

have demonstrated the efficacy of manipulating mood by showing brief videos, providing subjects with cookies, playing pleasant or unpleasant music, helping subjects "find" a small amount of money, inducing success on experimental tasks, and so forth. While these studies show that mild events of "hedonic relevance" induce a mild affective state more consistent with moods than emotions they do little to tell us what it is about these events that produce the state. Morris says they are events of hedonic relevance, but this says nothing more than they induce affect. We acknowledge their effectiveness but also suggest that however intuitive they may seem a fuller statement of what kinds of events are of mild hedonic relevance is absent.

The second position noted by Morris is that moods result from the offset of emotional reactions. Whether they are believed to be residues of the emotions, simultaneous affective experiences initially overwhelmed by the emotion or opponent process reactions to the end of the emotion varies. In each case, the mood follows the emotion. Morris (1989) says that it is difficult to comment on the validity of this position because there are too few relevant empirical studies.

Position 3 states that moods can result from the recollection of emotional events. It seems clear that mood states can be directly affected by cognitive processes of recall and imagination in the absence of actual, current affective events. Many popular mood manipulations count on it. So too do authors and screenwriters. Morris (1989) argues that the affective response is likely to be "mood like" in that it will be of low intensity with no specific response tendencies. While we do not argue that moods can result from recall or imagination we would add that so too can full blown emotional responses. Many people know all too well that thinking about a deceased loved one can generate real sadness, not undifferentiated background affect.

Finally, Position 4 states that inhibition of a full blown emotional response can result in a residual mood. Wharton and Erickson (1993) argue that "emotional display rules" exist in organizations and that there are increasing expectations to control emotional displays at work. To the extent that Position 4 is valid, these expectations of emotional suppression may increase the prevalence of negative moods, with accompanying consequences.

OTHER CAUSES OF AFFECT LEVELS AT WORK

Dispositional Influences on Affect

Thus far we have presented evidence that affective traits are one cause of job satisfaction. We have further maintained that these traits are partially rooted in the individual's biology, and may have some genetic basis as well.

Despite this, we were careful to note that these observations do nothing to rule out the important role played by situational determinants.

Main Effects of Affective Dispositions

Research suggests that affective dispositions exert main effects on job satisfaction. One of the best illustrations of this is a large survey of 1,816 drivers conducted by Czajka (1990). Czajka (1990) reports that job satisfaction was predicted by both positive affectivity ($r = 0.43$) and negative affectivity ($r = -0.46$). Additionally, after controlling for salary and tenure, NA and PA together account for 29% of the variance in job satisfaction. Czajka's (1990) findings are important for our present purposes, as he reports no evidence of a disposition by situation interaction. Instead, situational variables (i.e., pay and tenure) and person variable (i.e., NA and PA) each contributed additive main effects. Similar results were obtained in two studies by Cropanzano, James, and Konovsky (1993). Findings of this type would suggest that both affective traits and situational attributes impact job satisfaction. However, a closer look suggests that reality might be a little more complicated than this.

Affective traits appear to act as latent predispositions that help set the stage for individuals to have more or less intense bouts of emotion. These traits are affective predispositions and not the experience of affect, per se. Thus, we can further see that a given affective trait manifests itself only under particular environmental conditions. This is to say, for example, that an individual high in trait Negative Affectivity or neuroticism, need not go through life with a chronic sense of discontentment. Rather, such an individual is predisposed to react more strongly to negative events when they happen to occur. When no negative event takes place, individuals high and low in trait NA should have similar levels of mood and job satisfaction.

This observation has some interesting conceptual implications. If affective dispositions are defined as manifestations of repeated bouts with negative and positive emotion, and if such bouts of emotion are partially dependent upon the situation, then affective traits are (partially) defined in reference to the environmental context. Concrete evidence for this can be gleaned from a study by Werner and Pervin (1986). Werner and Pervin content analyzed the items from six widely used personality inventories. This included, but was not limited to, scales that measured dispositional affectivity. Across the six inventories, 55.7% of the items made specific reference to situations. Thus the personality traits were being measured, and to some extent defined, as to how they were manifested in particular settings.

This does not mean that researchers can or should not study traits and environments separately. In fact, the very complexity of the problem demands that we do so. Nevertheless, a full understanding of the way in which affective dispositions manifest themselves demands that we simultaneously consider

both the trait and the eliciting situation. Below, we consider this issue from two perspectives. First, we consider statistical interactions between affective dispositional and situational stimuli. Second, we explore the reciprocal transactions between the person and the environment.

Statistical Interactions

Bolger (1990) surveyed pre-medical students in the period leading up to and shortly after taking the MCAT exam. Bolger also assessed each individual's level of neuroticism. Neuroticism is closely related to trait NA (Meyer & Shack, 1989; Watson & Clark, 1984). Bolger (1990) found that individuals high in neuroticism were more reactive to the stress of the exam. In particular, the high neuroticism individuals reported more anxiety in the week preceding the MCAT, but were not more anxiety ridden in other weeks. Negative emotion was only manifested as the stressor approached. When the stressor was further away in time, all individuals were about equally low in mood negativity.

Similar findings were also obtained in another longitudinal study by Bolger and Schilling (1991). Within a community sample of adults, Bolger and Schilling (1991) found that participants high in neuroticism had much more negative responses to various daily hassles, such as interpersonal conflict.

In a field study of working individuals, Parkes (1990) drew similar conclusions. When placed in a stressful environment, teachers who were high in NA reported more symptoms of distress than did teachers low in NA. Conversely when the environment was less stressful, teachers reported similar levels of distress, regardless of their level of negative affectivity.

All of these findings were replicated and extended by Marco and Suls (1993). These later researchers also discovered that individuals high in trait NA were more reactive to negative events. Moreover, Marco and Suls (1993) also found that high NAs take longer to recover from a stressor. Once again, the emotional outcomes associated with NA were only present when a negative event occurred. At other times, individuals high in trait NA demonstrated levels of emotion that were comparable to their low NA counterparts.

These ideas were experimentally tested by Larsen and Ketelaar (1991). Larsen and Ketelaar (1991) first assessed undergraduate students on their levels of neuroticism and extroversion. (PA is highly correlated with extroversion, but extroversion includes other things as well. For a discussion, see Meyer and Shack [1989] and Johnson and Ostendorf [1993]). Larsen and Ketelaar (1991) then exposed subjects to three kinds of stimuli: positive affect provoking, negative affect provoking, and nonaffect provoking (neutral). As one might expect, individuals high in neuroticism reacted primarily to the negative events. They were relatively nonreactive to the neutral and positive stimuli. Conversely, individuals high in extroversion reacted mainly to the positive events. They, in turn, were relatively nonreactive to the negative and neutral stimuli. Again,

we see evidence that affective traits serve as predispositions to respond within a particular environmental context.

It is noteworthy that this reasoning has been directly applied to job satisfaction. In an experimental study Bittle and Hausenstein (1990) found that dispositional affectivity was only related to job satisfaction when the work environment was generally unenriched and negative. However, while in a relatively enriched environment individuals were generally satisfied with their work, regardless of whether or not they were predisposed to negative affectivity.

Trait affectivity does seem to be related to both one's mood and also one's level of job satisfaction. However, in both cases, the personality trait acts as an affective predisposition. That is, it predisposes people to respond with greater or lesser intensity to either a positive or a negative event.

The Dynamic Transaction Between the Person and the Environment

It is important to note that individuals are not passive recipients of environmental pressure. Instead, individuals move through their lives both influencing and being influenced by their environments. This is true for all personality traits, but we are here concerned with the evidence pertaining to affective predispositions. Unfortunately, virtually all of the research has been conducted with only predispositions for negative emotion. It is likely (albeit still unclear) that trait PA behaves in a similar fashion. In any case, these limitations in the literature have caused us to limit our discussion to trait NA and related dispositions.

Individuals high in trait negative affectivity behave differently than their counterparts who are low on this trait. In particular, they are more likely to engage in contentious interpersonal tactics by being obstinate or argumentative. For example, Buss, Gomes, Higgins, and Lauterbach (1987) found that individuals predisposed to negative emotion were more likely to quarrel with their spouses.

These findings were extended in a longitudinal field study by Bolger and Schilling (1991). In various settings, including the workplace, individuals high in neuroticism were more likely to argue and quarrel with others. Bolger and Schilling (1991) also found that this tendency to fight was actually one cause of the experienced negative mood. That is, by their contentiousness, individuals high in neuroticism elicited hostility from others. This hostility, in turn, caused them to experience negative emotion.

Although little direct evidence exists, it also seems possible that the work environment can affect individual levels of trait NA. In one longitudinal study, Kohn and Schooler (1982) found that trait levels of personal distress were accentuated by oppressive working conditions. For example, workers forced to labor under heavy work loads with tight deadlines were likely to show higher

levels of trait-based distress. Kohn and Schooler's (1982) study is highly suggestive. However, more research is needed to replicate and extend these findings.

Environmental Causes

Environmental psychologists have uncovered a variety of factors which can change the level of reported affect (see Bell, Fisher, & Loomis, 1978, for a good review). Such environmental conditions as weather, air pollution, noise, and negative ion level appear to influence affect and related behaviors. Generally these factors operate in the background, influencing mood states rather than specific emotions.

In general, several aspects of weather are related to self-reported mood. Laboratory studies have shown that exposing subjects to uncomfortable levels of heat produces negative mood states (Bell, Garnand, & Heath, 1984; Griffitt & Veitch, 1971). Similarly, Cunningham (1979) found that a hot temperature during the summer reduced mood levels while in the winter, a warmer temperature was associated with a better mood. It has been shown that sunshine has a positive effect on mood states (Persinger, 1975) and high humidity is associated with negative affect (Cunningham, 1979; Persinger, 1975).

Laboratory research has shown that exposing people to noxious pollutants can worsen their moods (Rotton, 1983) but the picture is complicated by research indicating that different pollutants have different effects during different seasons. For example, Cunningham (1979) found that higher levels of carbon monoxide were associated with better moods during the summer and worse moods in the winter. Obviously, these results and other results like them must be interpreted in the context of severe potential for spurious effects of other variables. Baron, Russell and Arms (1985) have shown that negative ions in the environment affect mood levels. However, in their research the direction of the effect depended upon other environmental stimuli.

Crowding is another environmental variable that can have negative consequences for mood levels (Freedman, 1975). Oldham and Fried (1987) found that perceptions of crowding were associated with lower levels of job satisfaction. However, the negative mood effects of crowding can be reduced when people believe they have personal control (Fleming, Baum, & Weiss, 1987).

Overall, the evidence suggests that a wide variety of environmental factors influence individual affect levels. By and large, these operate in the background to influence mood levels but it seems clear that their consequences on organizational behaviors, as mediated by mood states, are likely to be important.

EMOTION EPISODES: THE EBB AND FLOW OF EMOTIONAL EXPERIENCE

Our own discussion of emotions, guided as it is by theories and research on the topic, has so far characterized emotions as discrete reactions precipitated by specific events. Although we believe this to be a useful characterization of any specific emotional reaction, in a very important sense it misses a fundamental aspect of emotional experience. Frijda (1993) notes that when people are asked to describe an emotional experience, often they do not simply report a single emotion precipitated by a single event. Instead they report a series of emotional transactions with the environment, all coherently organized around a single underlying theme. Frijda refers to this coherent and dynamic series of emotional experiences as an emotion episode, a situation in which a single event of affective significance leads to the unfolding of a series of subevents, also with affective significance. Each of the subevents can produce a distinct, even opposite, emotional response but the full episode is driven by what Lazarus (1991a) would call a core relational theme.

Frijda (1993) goes on to say that during this episode the person remains in a state of "continuous emotional engagement" (p. 387). Emotional engagement refers to a heightened level of arousal and attention. To us, this suggests that during the emotion episode, the person's attention is focused on issues related to the underlying theme, possibly leaving fewer resources to commit to job performance. It also suggests that small events, coworker comments, organizational memos, and so forth take on increased, and perhaps unwarranted, emotional significance. Finally, it suggests that people may overreact to emotional events unrelated to the underlying core theme as their heightened level of arousal produces a misrepresentation of the event's emotional import. A likely consequence of emotional engagement is that people will experience more intense and diverse affective reactions than they would otherwise.

The effects of emotional engagement on affect levels during emotion episodes can be seen in research examining Zillman's Excitation Transfer Theory (Zillman, 1979). Excitation Transfer Theory proposes that individuals' emotional experiences are enhanced when people are already in aroused states, regardless of the source of the original arousal or of its initial hedonic direction. However, this excitation transfer should only occur when the arousal experience has become "disconnected" from its original cognitive label. Supporting data is found in a number of studies by Zillman and his associates (e.g., Cantor, Zillman, & Bryant, 1975; Zillman & Bryant, 1974; but also see, Branscombe, 1985). Of course, the persistent effects of mood on how we interpret the world (Morris, 1989), which we will discuss later, also illustrates the affective consequences of continuous emotional engagement.

Imagine a worker who hears about the possibility of a large scale layoff in his organization. This event, being of relevance to his well being, is likely to elicit an emotional reaction. Because it has negative implications it will elicit a negative reaction and because it involves the anticipation of future harm that negative reaction is likely to be fear or anxiety. This layoff possibility, in turn, instigates a series of subevents, many caused by the coping mechanisms of the worker himself, each of which can have some emotional significance. For example, the worker may talk to his supervisor who tries to reassure him of his worth to the company and these reassurances produce a positive affective state. The worker may talk to other workers who relate tales of downsizing or outplacement, each with emotional implications. During the "episode" the worker will experience wide swings of affect in both positive and negative directions. He will also engage in coping processes which can divert resources away from job activities and consequently reduce job performance.

The key element of the concept of emotion episodes is that these episodes represent the ebb and flow of emotional experience over time. While each of the events during the episode can be described in discrete terms, the episode itself has a coherence and a set of features that suggest it should be treated as a unit of analysis.

AFFECTIVE CYCLES: EXOGENOUS AND ENDOGENOUS CAUSES

Earlier, we stated that any analysis of affect as either a dependent or independent variable would require a full consideration of the fluctuation of affect levels over time. We are now prepared to offer a more detailed, albeit speculative, statement of our position.

We begin by suggesting that affect states can be described at two levels. First, one can describe an immediate affective state at a general or "primary" level. This description would refer to the state as being either positive or negative and of being at a certain level of intensity. In some cases, affective states can only be described at this primary level. A person's current mood, divorced as it is from specific references, is the notable example. In other cases, when specific emotions are involved, the affective state can be described at two levels, a general description involving valence and intensity (corresponding to the primary appraisal of emotion generation) and a secondary level which references the specific emotion(s) involved. Even where specific emotions are experienced, description and analysis at the primary level can still be useful.

Primary affective states can and do fluctuate over time. Particular trends in affect levels are the result of both endogenous and exogenous factors. Endogenous factors which influence affect trends include affective dispositions, established cycles of mood levels and chronic, situational circumstances of

affective significance. Exogenous factors are affective events which serve as "shocks" that disrupt the regularity of underlying affect patterns. They can be either work related or nonwork related.

In most cases, these shocks will constitute events which generate an emotional reaction consisting of both primary and secondary appraisal. Consequently, the affective state can be described both in terms of the general evaluative dimension and in terms of the specific emotion experienced. However, in some cases events of "mild hedonic relevance" may elicit a change in mood state without accompanying secondary appraisal and therefore without the experience of a specific emotion.

Finally, affective "shocks" produce "after shocks." Here we are referring to the emotion episodes we described earlier. To remind the reader, an emotion episode refers to a series of emotional experiences precipitated by a single emotional event. During the emotion episode the person is in a state of continuous affective or emotional engagement and the series of after shocks should continue to alter the normal affective pattern.

In Figures 8 and 9 we have tried to visually depict what we have been suggesting. Figure 8 shows a hypothetical picture of a pattern of affect for a single individual. Figure 9 shows one subject's data from a study by Weiss, Nicholas, and Daus (1993). Weiss et al. asked managers to provide self-reports of affect levels 4 times a day over a 3-week period. Figure 9 shows the results for one manager over 4 days, 16 total observations, presenting only the results for self-reports of being in a pleasant or unpleasant mood state.

It can readily be seen that the collection of affect data over any period of time allows for analysis of a number of parameters in affect trends, including means and variances of the aggregate set as well as the frequency and severity of "affect spikes." These parameters can serve as both dependent and independent variables in organizational analysis. For example, one might examine the relationship between dispositional variables and the mean or variance in affect states. Spikes serve as evidence for the occurrence of affective events which disrupt more typical affect trends and, therefore, can be examined in relation to these events. All of these parameters can be examined with regard to their association with traditional organizational criteria.

However, focusing on parameters which summarize these data hides the richness of the information inherent in data examined over time, its rhythm and its deviations from an underlying rhythm. Oscillating patterns or cycles of mood have been examined in nonwork settings by Larsen and Kasimatis (1990) and McFarlane, Martin, and Williams (1988) among others. Such cycles can be examined in terms of the amplitude of response as well as the frequency or period of the cycle. Larsen and Kasimatis (1990), reminiscent of Hersey (1932), showed that the extent to which a 7-day cycle described mood fluctuations was predicted by individual personality factors, with introverts showing a more cyclical pattern than extroverts. Studies of mood cycles within

Primary Affect Reaction

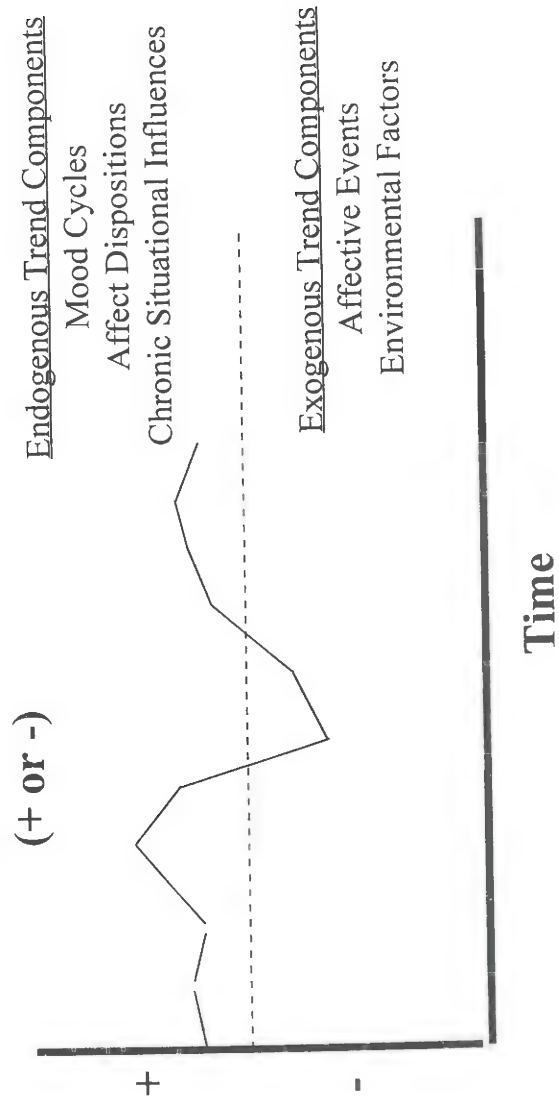


Figure 8. Affect Cycles

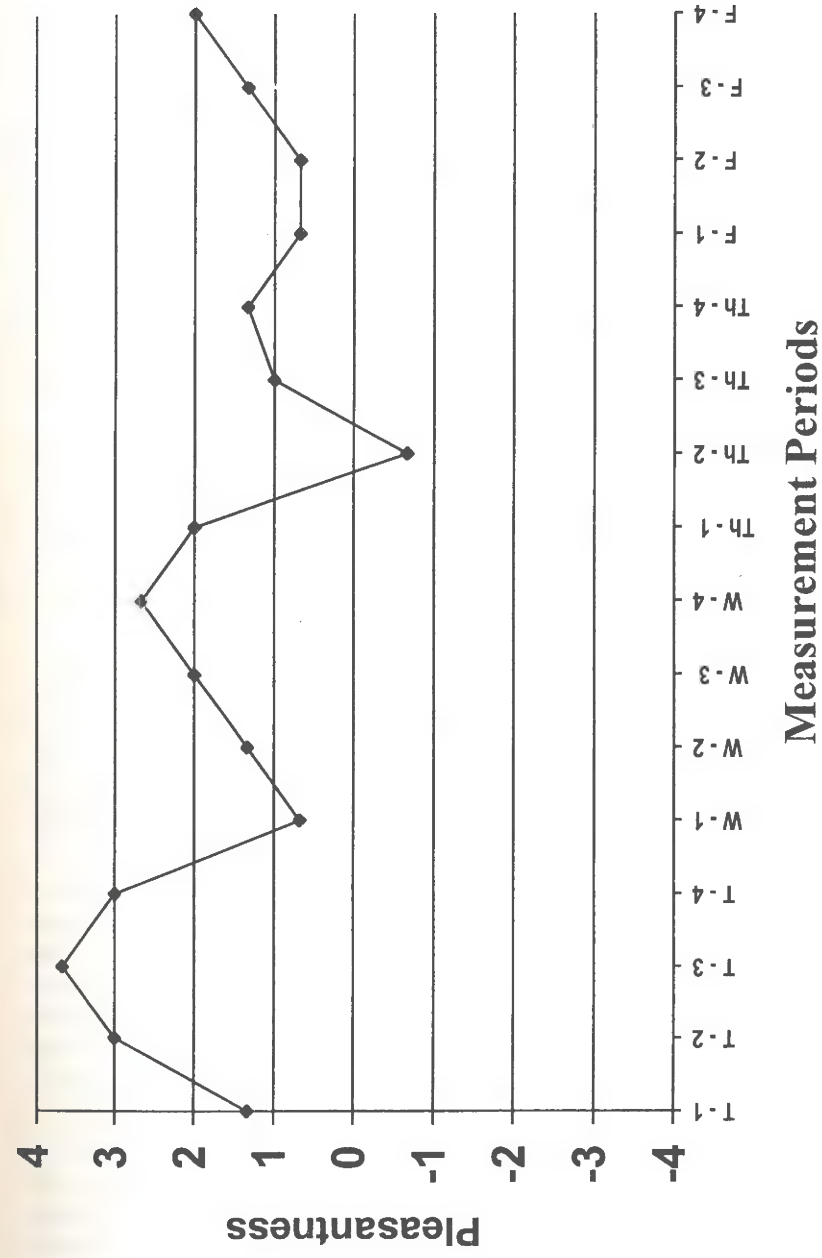


Figure 9. Affect (Pleasantness) Trends for a Single Manager (Sixteen Recordings Over Four Days)

days, requiring multiple measurements throughout the day, are less frequent and apart from Hersey's speculations, formal analyses of mood cycles with data collected in work settings do not exist.

As an example of the possible advantage of looking at patterns of affect, we offer the study of the relationship between affect and performance. While reported associations of job satisfaction with performance are basically negligible, such analyses involve correlating aggregate performance with "aggregate" satisfaction. In our opinion, examining the correspondence of affect patterns over time and performance patterns over time would be a more productive approach.

Cycles represent the endogenous components of the mood trends while exogenous components are represented by deviations from the cycles. One can focus on the stable patterns and treat the exogenous events as error, as do researchers searching for mood cycles, or one can detrend the data to examine effects of exogenous shocks. Each approach has a role to play in organizational analyses of affect.

While we think that the examination of the trends in affect is of real significance we do not want to misrepresent our position. To us, the affect trends are simply the history of affective experience over a period of time. As a documentation of that history, it may have predictive significance. However, the real action lies with the affective state at any particular time.

AFFECT AND SATISFACTION JUDGMENTS

A basic premise of this paper is that affective experiences at work influence overall judgments about satisfaction with one's job and do so independent of the influences of feature assessments. This position is consistent with more basic research on the affective and "cognitive" influences on general attitudes. In two separate studies, Abelson, Kinder, Peters, and Fiske (1982) asked survey participants to describe Presidential candidates in affective and trait terms. More specifically, participants were asked whether a candidate "has ever made you feel (angry, hopeful, etc.)" and also to evaluate that candidate in terms of specific traits (honest, smart, etc.). Regression analyses were conducted to examine the independent influence of both affective and trait ratings on overall evaluations of the candidates. In both studies the affect ratings consistently predicted the overall evaluations independent of the trait ratings. The trait ratings in fact were less useful.

More recently, Breckler and Wiggins (1989) reported two studies attempting to validate the distinction between affective and what they referred to as "evaluative" or belief influences on overall attitudes. In the first study students were given a list of objects or activities (e.g., computers, blood donations). Using scales developed for the study they were asked to indicate their beliefs

about the objects/activities and how each makes them feel. These were then correlated with global ratings of each object/activity. Partial correlational analyses indicated that the affective and belief components had independent influences on the overall attitudes. The second study replicated the first and also showed that the affective component better predicted behavior than did the belief component.

Taking the distinction between affective and belief components a step farther, Edwards (1990) showed that attitudes can develop out of both affective experiences and information about the attitudinal object. Moreover, the effectiveness of persuasion attempts depends on whether the nature of the attempt is consistent with the original mode of attitude formation. In addition, Miller and Tesser (1986) argued that instrumental behaviors are driven by the belief component and consummatory behaviors by the affective component. They demonstrated that by getting people to focus on one of the components they could influence subsequent behaviors involving the attitudinal object.

All four papers proceeded from the basic premise that attitudes are general evaluations which are influenced by both affective experiences with the object and sets of more abstract beliefs about the object. While these are often referred to as the affective and cognitive components of attitudes, Breckler and Wiggins (1989) correctly point out that because cognitive processes are an important part of affective reactions it is better to make a distinction between those influences which represent emotional experiences with the object and those influences which relate to sets of beliefs about characteristics of the object. Taken together, these studies demonstrate the usefulness of making that distinction.

The relevance of this work to the nature of job satisfaction is easy to see. The affective component of job satisfaction reflects the recall of affective episodes on the job and the belief component represents evaluations of the job in terms of its features, as operationalized in the various versions of cognitive/judgment theories.

With regard to job satisfaction, the importance of the belief component has been frequently demonstrated. The contribution of the affective component has been less well established. To help rectify this situation, Weiss, Nicholas, and Daus (1993) had a sample of managerial/professional employees complete diaries in which they reported their mood levels four times daily over a 3-week period. At the end of the three weeks and independent of the diary procedure, participants completed a questionnaire which included a 5-item overall job satisfaction scale as well as a VIE based belief assessment containing questions about the instrumentality of the job for receiving each of 10 outcomes and the valence of those outcomes.

While the intrusiveness of the data collection procedure limited participation to only 24 subjects, the results clearly support the relevance of affect as a predictor of satisfaction and the relative independence of affective and belief

based influences. Based on considerations described earlier, four different operationalizations of the mood self-reports were used: pleasantness, activation, positive affect, and negative affect. Average mood levels were computed (4 times daily over 16 days) and correlated with overall satisfaction. Three of the four correlations were statistically significant ($r = .66$ for pleasantness, $r = .47$ for positive affect, $r = -.41$ for negative affect) while the fourth ($r = .36$ for activation) approached significance.

Perhaps more importantly, regression analyses in which overall satisfaction was regressed on mood and VIE beliefs together demonstrated that both components had significant, independent influences on job satisfaction. Without getting into the question of which component is more important, the answer to which is probably "it depends," it is clear that with regard to judgments of job satisfaction both affective experiences and more abstract belief systems play a role.

The distinction between mood and emotion further complicates the analysis of affective influences on job satisfaction. We have argued, based upon Morris (1989), that moods are general affective states disassociated from particular events. They can arise as residual states after events or in response to the recall of previous emotional events. They can also arise from factors like the weather, having nothing to do with particular events. While, as in Weiss, Nicholas, and Daus (1993), one can chart the mood levels of individuals over the course of a day, it is more likely that specific events and not general mood levels are stored and recalled. Consequently, it may be that average mood level over a period of time predicts satisfaction (as in Weiss et al., 1993) because it is an indicant, however imprecise, of the frequency and/or intensity of affective events. It may also be the case that the average mood level predicts satisfaction because both share affective dispositional variance.

These positions are not incompatible and both suggest that part of a relationship between average mood level and satisfaction is spurious. If so, a better analysis of affective events and subsequent job satisfaction would focus on the occurrence of the events themselves and the affective reactions they generate or, at the very least, focus on significant changes in affect levels as indicants of affective events.

Not all of the relationship is likely to be spurious. To begin with, mood may color the interpretation of events. As such, being in a negative mood may result in a neutral event being interpreted as negative. More directly, a person's mood may trigger an actual event of affective relevance (e.g., an argument, a reprimand).

As certain as the dual influences of affect and belief on attitudes appear to be, the evidence for these influences does not speak to the basic question of whether attitudes are formed stored, revised, and recalled or whether they are constructed on demand. With regard to job satisfaction, is the evaluative judgment continuously revised by experience and therefore in place when

required by the satisfaction questionnaire or does the questionnaire instigate an attitude construction process and a new judgment?

Hastie and Parke (1986) have made the distinction between "on-line" and memory based judgments in person perception and this distinction has relevance here. With "on-line" judgments, evaluations are made at the time of exposure to the events or information relevant to the judgment. Later, a stored judgment is retrieved. With memory based judgments, the judgment is made later and based upon retrieval of representations of the initial events or information.

Wilson and Hodges (1992) have provided an important discussion of this topic with regard to attitudes. They begin their discussion with what they refer to as the traditional viewpoint, a viewpoint which states that attitudes are stable and persistent evaluations. According to the traditional view, when people are asked to report their attitudes toward some object, their job, their supervisor, and so forth, they open a "mental file containing their evaluation" and report it. Presumably, this evaluation is the result of on-line judgment processes.

The alternative position, which they advocate, states that people often construct their attitudes at the time the attitude is called for. In constructing these attitudes they consult a large "database" of relevant information including, presumably, affective experiences with the attitudinal object and belief based information. When constructing these attitudes the full database is never tapped. Rather, at any given time, people generate their attitudes from a subset of the "database" and the subset they use can itself be influenced by current contextual factors. Consequently, attitudes can be quite unstable because they are influenced by situational factors which determine which information is utilized.

Wilson and Hodges (1992) offer a good amount of evidence to support their alternative position, focusing on the extensive evidence on contextual effects on attitudes. Of particular importance is research showing that current mood state can influence attitudinal reports. From this literature it seems quite clear that the mood of a person at the time satisfaction is being assessed can also influence responses to satisfaction scales, independent of the history of affect or the nature of belief systems. Recently, Brief, Butcher, and Roberson (1995) rather dramatically demonstrated this phenomenon. Employees filled out an attitude survey in small groups. In some groups, prior to completing the survey, employees were given cookies, soft drinks and an inexpensive gift, a manipulation designed to enhance positive mood. Employees in other groups were simply asked to complete the survey. Reported job satisfaction was higher in the positive mood groups than in control groups.

Wilson and Hodges (1992) go on to say that not all attitudes are constructed at the time of attitude evaluation. Some are, in fact, stored and recalled. Wilson and Hodges offer a number of suggestions about which attitudes are likely to be constructed and which are likely to be stored but perhaps the most well

worked explanation is offered by Fazio (1986). Fazio describes attitudes as differing in "accessibility" which is simply the strength of the association between an object and an evaluative response. Attitudes gain in accessibility when then the association is strengthened by repeated calls for the evaluation or when the attitude has been formed by direct experience with the object.

Given the validity of Fazio's position, one could argue that attitudes formed on the basis of personal experience would be less influenced by contextual factors such as current mood. One could further argue that attitudes toward certain job facets, facets that have to do with "concrete" or tangible aspects of one's job, like coworkers or supervisors, are more likely to be formed by personal experience and are therefore less likely to be affected by context. More abstract features, security, trust, career development, as examples, are more likely to result from indirect informational influences and would be more affected by context. The study by Brief, Butcher, and Roberson (1995) examined only overall satisfaction and therefore does not allow for a test of this proposition.

Finally, if job satisfaction is at least partially constructed on demand one could reasonably ask about the way affective experiences are used in the judgment process. The nature of the storage and recall process is unclear. When attitude judgments are made, are affectively meaningful events somehow counted? Are they averaged over events with different intensities? If averaged, are they weighted by recency?

Very little research has been done on these questions. Diener and his colleagues (Diener, Colvin, Pavot, & Allman, 1991; Diener, Sandvick, & Pavot, 1990) have shown that the Subjective Well Being, a general judgment about satisfaction with one's life, depends more on the frequency of positive events than on their intensity. Diener speculates about a number of processes which lead to "psychic costs" following the experience of intense positive affect, thereby dampening their influence as well as the influence of subsequent positive experiences. Regardless of the processes involved, the suggestion that the frequency rather than the intensity of positive experiences has a more pronounced influence on satisfaction has implications for organizational practice. It suggests that major but infrequent affectively meaningful events such as recognition ceremonies or bonuses will be less important determinants of overall satisfaction than will working in an environment which provides daily, if only minor, positive experiences.

Affective experiences and object relevant beliefs together influence evaluative judgments. This much we know. Basic information about the cognitive processes involved remains speculative.

AFFECT AND PERFORMANCE

Perhaps the most disappointing aspect of decades of study on work attitudes is the failure to locate the holy grail of satisfaction research, an effect of

satisfaction on performance. The typical study examining satisfaction-performance relationships has taken the following form: satisfaction, assessed as a bipolar construct with positive (satisfaction) and negative (dissatisfaction) poles is measured at some arbitrary point in time and correlated with some aggregate measure of performance. It is generally known that such studies have produced basically nothing. Satisfaction shows negligible correlations with performance (Iaffaldano & Muchinsky, 1985; Podsakoff & Williams, 1986) and when correlations are found causal direction is ambiguous. Correlations with indices of withdrawal (turnover, absenteeism, lateness) are perhaps more consistent but still quite small (Hulin, 1991).

Over the years numerous attempts have been made to explain the discrepancy between the intuitive appeal of the proposition and the absence of supportive results. So, for example, Fisher (1980) and Fisher and Locke (1992) have suggested that the lack of a relationship between satisfaction and performance was due to the discrepancy between the "generality" of attitudes and the "specificity" of most criterion indices. Solutions to this problem of inconsistent generality involve either making the attitude more specific, assessing "attitudes toward the act," or making the behavior more general, assessing aggregated patterns of multiple behaviors.

Neither solution is particularly satisfying. The former solution essentially changes the concept of job satisfaction in the service of theoretically uninteresting predictability. The second is perhaps more interesting but runs the risk of creating aggregations that have little practical meaning to organizations, also in the service of predictability.

Interestingly, rather than trying to explain the absence of findings one might ask why any relationship would be expected. What is not often said is that in the form in which the key constructs are conceptualized and measured there is very little reason to expect any relationship to begin with. With regard to productivity, one is hard pressed to develop a rationale for why a worker's overall evaluation of his or her job should in any way influence how hard he or she works on the job, what strategies he or she employs when doing the job or any of the other factors which affect task performance. With regard to withdrawal, the behavioral processes are perhaps easier to accept, generally involving decisions in which job satisfaction is one factor entering into a withdrawal decision. Even here, however, the decision process seems better suited to turnover than absenteeism or lateness which appear to be more spontaneous and less "thoughtful."

Our interest is, of course, affect and our objective in this last section is to examine the conceptual relationships between affective states and job performance, broadly defined. Generally, we will keep our reviews of the literature brief, as good reviews exist elsewhere (see Morris, 1989, for the basic literature on the effects of moods and Isen & Baron, 1991, for a more organizationally focused review of the effects of positive affect). Our focus will

be more on the conceptual structure of these linkages, although describing these linkages will, of necessity, involve references to specific studies.

Affect versus Attitude Driven Behaviors

To begin with, any understanding of the relationship between affect levels and work behaviors must begin by drawing the distinction between affect driven behaviors and attitudinally driven behaviors. Certain work behaviors are direct responses to affective experiences. So, for example, mood influences helping behaviors, information processing strategies and probability judgments (Morris, 1989). Similarly, more overt negative emotional experiences are likely to lead to specific coping responses (Lazarus, 1991a, 1991b). The particular pattern of responses can have important effects on work performance and these effects are not mediated by any relationship between affective experiences and satisfaction judgments. Thus, for affect driven behaviors, direct affect-performance relationships without nonspurious satisfaction-performance relationships would be expected. Further, because affect levels can fluctuate we would expect these affect driven behaviors to be of a relatively short duration and be high variability. This would suggest that any relationship would be best captured by analyses which assess to congruence of patterns of affect and performance.

Other work relevant behaviors are attitudinally driven. Attitude driven behaviors are directly influenced by overall evaluations of one's job and consequently any relationship between affect levels and these behaviors will be mediated by job satisfaction. These are likely to be behaviors which result from well considered decisions and specifically, those behaviors where the overall evaluation of the job enters into that decision.

Hulin (1991) has suggested that discrete withdrawal behaviors like lateness, absenteeism, turnover, and retirement are in fact all manifestations of an underlying latent withdrawal propensity. In his view, the common finding of low correlations among these behaviors is primarily due to attenuation resulting from their low base rates. Working from this position, Hanisch and Hulin (1990) attempted to show that retirement is one manifestation of this underlying withdrawal construct. In fact, what they showed was that the four withdrawal behaviors sorted into two factors, "work withdrawal" which included indices of unfavorable work behaviors, lateness and absenteeism, and "job withdrawal" which included turnover intentions and desire to retire. In addition, regression analyses suggested that JDI factors like pay satisfaction or work satisfaction were better predictors of job withdrawal than work withdrawal. This last finding is consistent with a generally better association between satisfaction and turnover than satisfaction and absenteeism (Hackett & Guion, 1985). (Lateness has been too infrequently studied to draw any conclusions.)

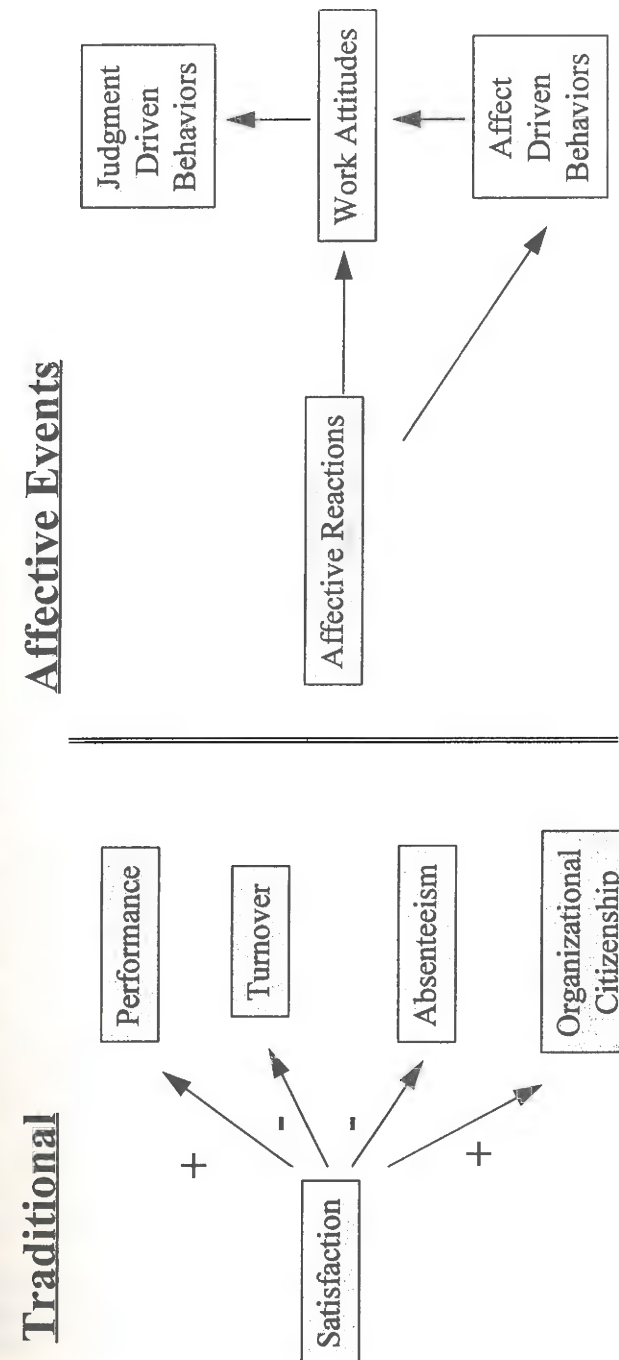


Figure 10. Affect and Performance: Two Models

While this two factor solution and the JDI correlations require replication, the findings are clearly consistent with our distinction between affect driven and attitude driven behaviors. Turnover and retirement are behaviors that require a thoughtful decision and satisfaction, the overall evaluation of one's current job situation, is likely to be one factor entering into that decision. Lateness and turnover are less "considered," tend to be more spontaneous, and are likely to be more a function of immediate affect levels.

The distinction between affect driven and attitude driven behaviors rests on the assumption that affect levels have direct behavioral consequences. In the next sections we point to the evidence with regard to the effects of emotions and moods.

Affect Driven Behaviors: Emotions

Throughout this paper we have distinguished between affective states which are unfocused, relatively mild and exist as background to our daily experiences (mood) and more overt emotional reactions of greater intensity of which people are aware (emotions). Discussion of the nature of affect driven behaviors will be facilitated by maintaining this distinction. Partly this is due to the fact that the emotion and mood literatures tend to be distinct and partly this is due to the fact that the effects of affective states, particularly negative ones, may depend on the degree of awareness of the state. Nevertheless, it is important to note that this distinction can be pushed too far. Certainly, most researchers from both traditions rarely worry about a difference between mood and emotion and therefore manipulations can overlap. Further, as mentioned earlier, overt emotional events may be one cause of longer lasting mood states.

Emotional reactions are often characterized as dysfunctional, disorganizing states. We believe, following Lazarus (1991a), that this is a misconception. Emotional responses are generally quite functional, but they are functional *qua* the emotion. They do not disorganize behavior as much as they reorganize or redirect it. Emotions do interrupt ongoing behavior (Lazarus, 1991a; Mandler, 1984). They have what Frijda (1993) refers to as "control precedence." People in an emotional state tend to be controlled by that state, they tend to be preoccupied by the emotion and there is a persistence to behaviors designed to deal with the emotion. This control precedence is particularly dramatic in the case of the emotion episodes which we described earlier. From the perspective of the previous behavior, this may seem disorganized and disruptive. However, from the point of view of the emotional problem it seems less so. Emotions "organize" behavior around the demands of the precipitating situation and "disorganize" the activities that were disrupted.

For our purposes, we need to examine the effects of this "reorganization" response on job performance. In our opinion, the analysis of the performance implications of emotional states reduces to a distinction between two domains

of behavior. Behaviors in the job domain are those behaviors required to do one's job. Behaviors in the emotion domain are those behaviors driven by the emotional state. The only question of relevance to job performance is this: "How are the behaviors in the emotion domain related to the behaviors in the job domain?"

Three answers are apparent. First, behaviors in the emotion domain can interfere with behaviors in the job domain. Emotional reactions can produce responses incompatible with job demands or can use up cognitive resources needed for job performance. Second, behaviors in the emotion domain can facilitate job performance, perhaps by increasing arousal levels or by instigating performance compatible behaviors (e.g., increased social behavior for a salesperson). Third, the behaviors in the emotion domain may be unrelated to those in the job domain. The key point, of course, is that behavior is not performance. The performance implications of emotions will depend on the match or mismatch between behaviors generated by the emotion or the resources used by the emotion response process and the behaviors and resources required by the task.

This being said, it is our contention that in most cases the emotion responses will tend to be incompatible with behavior in the job domain, producing performance decrements. Interestingly, these decrements are likely to occur as a consequence of both positive and negative emotions, because the management of both types of emotions will require resources which could be used for task performance and both types of emotions are more likely to produce job incompatible rather than job compatible behaviors. This prediction is in direct contradiction to the intuitive prediction of a positive performance effect for positive emotions and a negative effect for negative emotions.

In addition, we suggest that the performance implications of negative emotions will be more pronounced than those of positive emotions. Negative emotions serve as signals that some state of affairs is problematical. The sequence of activity involves primary appraisal, secondary appraisal and the development of a coping strategy designed to correct the situation. These activities are likely to be more extensively and continuously disruptive than are the activities resulting from the appraisal of a positive state.

We would therefore predict greater decrements in performance for negative emotional states than for positive states and certainly would be hard pressed to predict increments in performance for either state except under those rare circumstances where the behaviors in the emotion domain and job domain are compatible. Certainly, predicting simple linear associations between affective states (positive to negative) and performance (positive to negative) seems overly simple. The asymmetry for the performance implications of positive and negative emotional states is consistent with the research by Hersey (1932) which we cited earlier.

The behavioral implications of negative emotional states are generally discussed under the topic heading of coping strategies. It is not our desire to review this extensive literature. We do, however, want to comment on the important position offered by Lazarus and Folkman (Folkman & Lazarus, 1990; Lazarus, 1991a). Their theory identifies eight different coping strategies in response to a negative emotional event. These eight can be further reduced to two categories: problem focused coping and emotion focused coping. Problem focused coping deals directly with the emotion eliciting situation, through problem solving or confrontation. Emotion focused coping tries to deal with the affective state rather than its cause by denial, personal control of affect, social support, and so forth.

The choice of strategy has obvious performance implications but one should not be misled into thinking that problem focused coping is more performance efficient than is affect focused coping. Problem focused coping involves planning to deal with the emotional situation. This can be consuming of time and resources and can have negative effects on performance. On the other hand, affect strategies which involve denial might be more efficient in the short run because they allow the person to focus on the job.

However, we also need to make the distinction between short-term and long-term solutions. If we assume that elimination of the problem is the most performance effective strategy in the long run then strategies which avoid problem solving are not long-term efficient. In any case, research on the relationships between typical coping strategies and performance on jobs with different behavioral demands would be a useful activity.

Affect Driven Behaviors: Moods

The effects of mood on memory, judgments and behaviors have been studied quite extensively in the last decade. Research by Alice Isen has stimulated much of this work and extensive reviews of the literature can be found in Isen and Baron (1991) and Morris (1989). While Morris' book primarily reviews the basic research on the topic, Isen and Baron present reviews of both the basic and organizational literatures.

Before proceeding, it will be useful to again remember the distinction between behavior and performance. Mood has well documented effects on such things as memory, judgment, and social behaviors but the performance implications of these effects depend upon task demands. So, for example, mood appears to influence the depth of processing on cognitive tasks (Sinclair & Mark, 1992). The effect on performance will depend on the processing requirements of the job.

Three additional factors complicate efforts to draw definitive implications for organizational behavior from the basic literature on moods. First, mood

effects themselves are complex. Effects are often inconsistent and researchers have most recently reduced efforts to document main effects and instead have searched for moderators and theoretical explanations that provide coherent organization to apparent inconsistencies. Consequently, we will provide an overview of both basic findings and theoretical perspectives.

Second, the effects of mood are not always symmetric (Morris, 1989; Taylor, 1991). In the basic literature, much of the research has independently manipulated positive mood or negative mood and then compared the mood induced group to a control group not experiencing the mood manipulation. Even where both positive and negative moods are manipulated in the same study, results have been generally interpreted independently for the effects of positive mood, compared to a neutral mood, or negative mood, compared to a neutral mood. These paradigms can hide the fact that when being in a positive mood has effect A, being in a negative mood does not necessarily have an effect opposite to A. For example, being in a positive mood often (but not always) increases helping behavior when compared to a control condition of a neutral mood (Isen & Baron, 1991). However, being in a negative mood can also increase helping behavior, again when compared to a neutral condition (Morris, 1989).

Third, positive mood effects are almost entirely demonstrated by way of experimental studies where mood is manipulated with events of minor positive hedonic relevance. Isen's work (Isen, 1984; Isen & Baron, 1991) best illustrates this approach. People find money in telephone booths, they are given small prizes, they are shown funny movies or listen to pleasant music. Negative mood effects, on the other hand, are demonstrated in two distinct ways. First, events of minor negative hedonic relevance are manipulated. People are told they have failed some task or see a depressing movie or are asked to read sad stories. These kinds of studies parallel the positive affect studies and their results can be more or less compared to examine the differential effects of positive and negative moods. Negative mood effects are also demonstrated by comparing chronically, clinically depressed people with normals or sometimes by comparing less severe but still chronically dysphoric people with normals (Conway & Giannopoulos, 1993). These studies raise all of the traditional concerns of causal direction and spuriousness as well as new issues of the effects of mood intensity. We believe that the results of studies where negative mood is manipulated are of greater relevance to work issues than are results drawn from research with the chronically depressed.

The effects of mood have generally been organized into four categories: mood effects on memory, mood effects on evaluative judgements, mood effects on processing strategies, and mood effects on social behaviors. All have relevance to job performance and we will discuss each in turn.

Mood and Memory

One of the most extensively researched topics is the effect of mood on memory. Most of the research has been stimulated by Bower's (1981) integration of mood and emotion with an associative network model of memory. In this model emotions, like ideas and events, are represented as nodes in a network of associations or linkages. Whenever a node is stimulated, for whatever reason, activation spreads to connected nodes. If the activation level crosses some threshold the idea represented by the connected node is brought into consciousness (remembered). A number of predictions for the effects of mood on memory can be generated by this model but the two that have received the most attention have been the predictions of "state dependent memory" and "mood congruent memory."

State dependent memory refers to a facilitation of memory when the psychological or physiological state at the time of learning matches the state at the time of recall. So, for example, if you are in a negative mood when you learned some material your later recall of that material should be facilitated when you are again in a negative mood. This prediction derives from the idea that the material and the mood are associated at the time of learning. Activation of the mood at time of recall spreads to the learned material increasing the likelihood of the material reaching the activation threshold and thereby being brought into awareness. The hedonic tone of the learned material (positive, neutral, or negative) is of no relevance to the facilitation of recall.

Initial research by Bower and his associates seemed to support this position (Bower, 1981). Subsequent research has been neither strong nor consistent (Clore, Schwarz, & Conway, 1994; Morris, 1989) leading even Bower (Bower & Mayer, 1985) to question its robustness. (But, see Eich, 1995, for a discussion of some conditions which may facilitate the state dependent memory effect.)

Mood congruence effects are demonstrated when memory is facilitated by a match between the hedonic tone of the material being recalled and the mood at the time of recall. So, for example, one might ask whether being in a good mood facilitates the recall of positive as opposed to negative material. This issue of recall congruence has been considered important to mood researchers because the phenomenon has implications for the effects of mood on judgments and behaviors that rely on the recall of information. Consequently, a good amount of research has accumulated on the topic.

Overall, mood congruence finds more support than does state dependent memory, but the results are still not entirely straightforward. Clore, Schwarz, and Conway (1994) have most recently reviewed the literature on mood congruent recall and conclude that results support a congruence position, but not as would be predicted from an associative network model. More specifically, they argue that while positive moods facilitate the recall of positive materials and inhibit the recall of negative materials negative moods inhibit

the recall of positive material but do not facilitate the recall of negative material. Clore et al. suggest that this asymmetry may be due to a mood management or mood repair process, whereby people in a negative mood deliberately avoid the recall of negative material in order to reduce their negative mood. However, as Clore et al. (1994), Blaney (1986), and Morris (1989) all point out, this mood repair process also suggests that people in a negative mood will deliberately recall positive material as well as repress negative material and this is not generally found. In any case, this issue of incongruence in the way positive and negative moods affect the recall of positive and negative material does not invalidate the basic finding; people in a positive mood recall more positive items from memory than negative items (recall of positive items is facilitated and negative items inhibited) and people in a negative mood recall more negative items than positive items (recall of positive items is inhibited).

Mood and Evaluative Judgments

Given the effects of mood on memory, one would naturally expect to find a biasing effect of mood on memory based judgments. In fact, this bias has been repeatedly demonstrated. So, for example, mood influences the evaluation of the positiveness or negativeness of events, the evaluation of neutral objects, the evaluation of other people and the perceived likelihood of positive or negative events occurring (Morris, 1989). All of these influences are in a mood congruent direction.

A good organizational example of this biasing effect is provided by the Brief, Butcher, and Roberson (1995) paper which we discussed earlier. They had two groups of employees complete a traditional job satisfaction questionnaire. Recall that prior to filling out the survey, some employees were placed in a positive mood while the remainder of the employees were not given a positive mood induction and served as the control group. As expected, employees in the positive mood reported higher job satisfaction than did employees in the control group.

The biasing effect of mood on evaluative judgments would appear to be a direct outcome of mood congruent memory effects. That is, when people are called upon to make judgments of evaluation, event probabilities, and so forth, they search their memories for information relevant to the judgment. If the mood they are in influences what they recall, as it does, then it should also influence the judgments that are based on these recollections.

As compelling as the memory based explanation is for these effects of mood on judgment, it does not appear to account for the phenomenon. Two findings, in particular, cast doubt on the memory based explanation. Johnson and Tversky (1983) had subjects read newspaper stories about deaths from different causes (illness, murder, fire) and then complete a questionnaire asking about the risks of dying by various causes. As intended, the newspaper articles

produced a negative affective state in the subjects and subjects in these negative states reported greater concerns about dying from various causes than did controls. Of particular interest is the finding that the concerns were unrelated to the type of death that produced the original negative mood state. That is, people whose negative mood was caused by reading about someone dying from leukemia showed no greater concern about dying from illness than about dying from an accident. This finding, as Johnson and Tversky pointed out, is inconsistent with a memory based process because such a process would predict that the mood induction information would be most likely to cue memories related to that event.

Schwarz and Clore (1983) asked people in positive and negative mood conditions to respond to a life satisfaction questionnaire. Ordinarily, as predicted from any memory based explanation, one would expect that current mood would influence reports of life satisfaction. However, Schwarz and Clore also provided some subjects with an explanation for why they were in the mood they were in. Their findings clearly showed that current mood only influenced life satisfaction evaluations when subjects *were not* given a reason for their mood state. This finding, replicated on numerous occasions (Clore, Schwarz, & Conway, 1994), is difficult for any memory based explanation since these explanations posit mood as a memory cue regardless of any attributional information which might be available.

How is the mood effect on evaluative judgments to be explained if not by biased recall from memory? An alternative position, gaining popularity, is the "mood as information" position advocated by Schwarz and Clore (1988; Clore, 1992). The basic idea of this position is that the mood you are in is a piece of information you use to tell you how you feel about the object being judged. Essentially, you misattribute your affective state to the object or issue being evaluated and your judgment is biased accordingly. Let us illustrate this position by referring back to the paper by Brief, Butcher, and Roberson (1995). The reader will recall that employees placed in a positive mood at the time of completing a job satisfaction questionnaire reported higher job satisfaction than did control subjects. A memory based explanation for these results would suggest that the positive affect facilitated the recall of positive information used in making the satisfaction judgment. The mood as information position would suggest that the employees misattributed their current mood to the topic of the questionnaire, thereby assuming they felt better about their jobs than they would have in a neutral mood state. The mood as information position would also predict that the mood biasing effects on satisfaction can be eliminated by providing attributional information when the survey is administered.

The mood as information position suggests conditions when the biasing of effects of mood should be reduced. The existence of these moderating conditions does not, however, reduce the importance of mood on organizationally relevant evaluative judgments. We have previously defined

mood as affect disconnected from its causes. In the Schwarz and Clore paradigm subjects are provided with clear, but false, explanations for their moods. This does not imply that in natural contexts such clear attributional factors will be readily available or that people in particular moods will be actively searching for these attributions. Consequently, it seems likely that the moderating condition of clear mood explanations is a low probability event in work contexts and therefore main effects of moods on evaluative judgments are more likely than not. Because so many organizational behaviors involve judgments and decisions based on evaluations of the likelihood of positive and negative outcomes the impact of mood states seems clear.

Mood and Processing Strategy

Sinclair and Mark (1992) have recently organized the diverse effects of mood on judgment in terms of the effect of mood on processing strategy. They argue that the findings consistently point to the conclusion that people in a positive mood are more likely to engage in simplified, heuristic processing strategies when making judgments and decisions while people in a negative mood are more likely to engage in systematic processing. The evidence they marshal for this general phenomenon is quite convincing. For example, in persuasion studies people in a positive mood are more influenced by peripheral cues such as source attractiveness while people in a negative mood are more influenced by central cues like message quality (Worth & Mackie, 1987). Such a difference in cue use is generally attributed to differences in depth of processing (Eagly & Chaiken, 1993). In addition, when making judgments about others, people in positive moods tend to rely more on stereotyping information while people in negative moods rely more on individuating information (Bodenhausen, 1993). Positive mood appears to increase halo among judgments on different dimensions when compared to neutral and negative moods (Sinclair, 1988). Finally, when compared to controls, people in a positive mood use fewer categories to group objects (Isen & Daubman, 1984).

In aggregate, these findings seem to converge on a general processing difference between people in positive and negative moods. People in a positive mood are less likely to engage in effortful, systematic processing than are people in negative moods. This consistent use of heuristic processing can, of course, be dysfunctional when tasks demand more effortful processing. For example, Sinclair and Mark (1992) found that statistics students placed in a positive mood were less accurate in their estimation of correlation coefficients from scatterplots than were students placed in a negative mood.

Sinclair and Mark (1992) examine the potential explanations for this general finding of processing differences and conclude that a combination of two seem reasonable. The first explanation involves mood maintenance or mood repair processes. People in a positive mood may avoid systematic processing because

engaging in effortful cognitive processing may eliminate the positive mood. People in a negative mood, on the other hand, may be more inclined to engage in systematic processing as a distraction to help eliminate the negative mood.

The second and possibly coexisting explanation involves the mood as information explanation described earlier. This explanation assumes that current mood states are used as cues for judgments about the satisfactoriness of situations. People in negative moods judge the situation as somehow unsatisfactory, are motivated to rectify the situation and engage in the cognitive activity necessary to accomplish that goal. People in positive moods judge the situation as more satisfactory, less problematic, and therefore feel that systematic processing is unnecessary.

We would be remiss if we did not comment on a line of research which appears, on the surface, to be inconsistent with the conclusions of Sinclair and Mark (1992). Ellis and Ashbrook (1988) have suggested that chronically depressed individuals engage in more self-focused attention and negative thinking than do normals. This, in turn, reduces the cognitive processes available for problem solving producing a performance decrement on tasks that require extensive cognitive processing.

Recently, Conway and Giannopoulos (1993) provided evidence to support the Ellis and Ashbrook position. They provided depressed and non depressed subjects with information about 70 different jobs along five dimensions and asked the subjects to provide overall evaluations of the jobs. Using a regression based policy capturing procedure they found that the depressed subjects used fewer dimensions in generating their evaluations than did the controls.

Clearly, this data and the Ellis and Ashbrook position generally need to be reconciled with the evidence provided by Sinclair and Mark. One obvious difference is that Ellis and Ashbrook focus on the effects of chronic depression, a negative affective state of longer duration and greater severity than the mood manipulations used in studies cited by Sinclair and Mark. Whether this accounts for differences in results remains to be determined. However, if the effects of negative mood on processing strategy are curvilinear then questions of appropriate levels for generalization to organizational contexts become significant.

Recently, Staw and Barsade (1993) examined the effects of affective traits on managerial processing strategies. First year MBA students participated in an assessment center which included an in basket exercise measuring decision-making strategies (use of information, accuracy of judgments, etc.). Individuals assessed as having either high, medium, or low trait positive affect were compared. Results indicated that compared to subjects with medium or high trait positive affect, subjects with low trait positive affect used less data, requested less information and were less accurate in their judgments. Staw and Barsade's results are more consistent with the Ellis and Ashbrook position than they are with the Sinclair and Mark position. However, it must be noted that

Staw and Barsade focused on trait affect levels rather than state affect levels. It is worth investigating whether trait based affect differences evoke different cognitive processes than state changes in normals. In any case, the Staw and Barsade findings in addition to the apparent conflict between the Ellis and Ashbrook and Sinclair and Mark positions provides further evidence of the complexity of mood predictions.

Mood and Behavior

Helping behavior is the most frequently studied behavioral consequence of mood, stemming directly from the work by Isen and her colleagues (Isen, 1984; Isen & Baron, 1991). Given the potential relevance of helping to such important organizational relevant variables as citizenship behavior and customer service, it is not surprising that Isen's work has received a good amount of attention in the organizational literature (see, for example, George, 1991; George & Brief, 1994). The very general finding of Isen's work on this topic is that positive mood enhances helping behavior and cooperation while reducing aggressiveness. Both Isen (1984) and Isen and Baron (1991) review considerable laboratory evidence indicating that being in a positive mood makes people more generous, helpful, and cooperative, when compared to neutral mood controls. While in a good mood people report greater liking for others and evaluate people more favorably.

Moreover, it appears that it is easier to resolve conflicts among people in a positive mood. For example, in the context of organizational negotiations, people in a good mood are more likely to reach "win-win" integrative bargaining solutions (Carnevale & Isen, 1986) and are more likely to make cooperative concessions during negotiations (Baron, 1990).

The one caveat to the general finding of increased helping and cooperation is that the effect is lost if people believe that helping may interfere with the mood (Isen & Baron, 1991). Isen explains this exception to the general finding by invoking two explanations. First, there is a basic tendency for positive moods to increase helping. Second, there is a coexisting desire to maintain a positive mood. When the helping interferes with the second desire it is avoided.

As often turns out to be the case, the effects of negative mood are more complicated. Because Isen's work compares positive mood subjects to controls, the findings do not enlighten us as to the effects of negative mood. However, one might expect that if being in a positive mood increased helping and cooperation being in a negative mood would decrease it. This turns out not to be the case. In fact there is extensive evidence to indicate that being in a negative mood also can serve to increase helping behavior (Carlson & Miller, 1987). The most likely explanation for this effect involves self-regulatory processes wherein people in negative moods engage in helping behavior to

eliminate the negative mood (Morris, 1989). When people are led to believe that their helping will not reduce their moods they do not help (Manucia, Baumann, & Cialdini, 1984).

Although both Isen and Baron (1991) and George and Brief (1994) provide thoughtful discussions of the relevance of the mood and helping literature to organizational behavior not much empirical research has been conducted. George (1991) found that a state measure of Positive Affect did correlate with a measure of helping and also with a measure of customer service behavior. No other quality empirical studies exist. However, given the complexity of the basic findings, the moderators of the effect of positive mood on helping, and the possibility that negative mood can also increase helping behaviors under certain circumstances, predictions in organizational settings will not be straightforward.

Given that being in a positive mood increases the estimated probabilities of the occurrence of positive events and being in a negative mood increases the estimated probabilities of the occurrence of negative events (Wright & Bower, 1992) an effect of mood on behaviors based on probability estimation would be expected. In fact, the relationship between mood and risk taking has been well researched and consistent effects are found, but, as before, these effects are not what one might initially expect. In fact, it is with risk taking that the push and pull of cognitive processing and mood maintenance seem to show up most clearly. In the classic study on the topic, Isen and Patrick (1983) showed that subjects given a hypothetical risk situation were willing to risk more than controls, but when they were placed in a real situation where their own resources were put at real risk they engaged in less risky behavior. Later Isen, Nygren, and Ashby (1988) showed that people in a positive mood expressed higher negative utilities for loss than did controls, apparently overcoming any event probability differences when making decisions about risky outcomes.

Throughout this section, we have emphasized the complex nature of mood effects on judgments, processing strategies, and behaviors. Nothing in this area appears to be straightforward. However, the complexity of findings should not be confused with an absence of findings. Mood effects, while complex and interactive, are also consistent and pronounced.

Overall, it seems that mood effects are a complex interplay of both cognitive and motivational factors. On the cognitive side, mood effects on memory, attributions and processing strategies play a role. On the motivational side, mood repair (for negative mood states) and mood maintenance (for positive mood states) also influence responses. A particular prediction in any situation depends on the mood state, the task, and the aforementioned cognitive and motivational processes.

FINAL COMMENTS

What we have attempted to do in this paper is to flesh out a structure for an event based approach to affective experiences at work and to fill in some of the details by referring to the basic literature on emotions and moods. Along the way, we have contrasted our position with some more traditional positions on similar topics. In some cases we offer our position as a complement to those traditional positions, in other cases as an alternative. In all cases we hope to encourage readers to rethink some issues they may have taken for granted.

Because we summarized our position early in the paper, we think it unnecessary to do so again. Nevertheless, there are some key points and implications which need to be reiterated.

To begin with, job satisfaction is not affect and it is time we stopped saying it is. Over the years we have developed a construct called job satisfaction. This construct, as defined by its most popular operations, is the overall evaluation one has towards one's job. There may be differences of opinion about the usefulness of the construct but the construct exists as what it is and it is not affect.

Second, affective experiences in their traditional forms as emotions and moods are potentially important aspects of work experience. These affective states influence performance and job satisfaction but their performance implications are, by and large, independent of their relationships with satisfaction. It is the failure to realize this point, in conjunction with the aforementioned confusion of affect and satisfaction, that has led to the dismal record of satisfaction-performance research.

Third, affective states can and do fluctuate over time and the performance implications of affect depend on affect states at particular times. Satisfaction is also influenced by current affect levels, along with affect histories. Consequently, time of assessment cannot be arbitrary and patterns of change over time become primary dependent variables. When change becomes our focus of attention, we have to modify the structure of our causal explanations as a consequence. Explanations for change cannot be found in stable, steady characteristics of people or situations. Instead they are found in discrete events.

Take the orbits of the planets as an example. The continued stable pattern of planetary movement is "explained" in terms of the functional relationships of the stable characteristics of the system (e.g., the mass of the planets and the sun, etc.). How would we explain a planet pulling out of its orbit? Any explanation would require the addition of a discrete event, like a meteor.

So too with our organizational variables. We must understand when we are interested in stable patterns and search for functional relationships among state variables, and when we are looking at changes and search for precipitating events. In this paper, our focus has been on changes in affect levels, their causes in events and their consequences in changes in performance. However, we have

also recognized that there are endogenous elements to the levels and patterns of affective states which are most efficiently explained in terms of stable attributes.

Finally, it is perhaps somewhat injudicious for us to admit that as we developed our position our thoughts kept returning to the work of Frederick Herzberg. We say injudicious because we are well aware of the way Herzberg's theory is treated in current I/O Psychology. About the only thing positive anyone has to say about his work is that it focused attention on intrinsic task characteristics as influences on motivation and satisfaction. Beyond this, the ideas remain only of "historical interest" (see, for example, Dipboye, Smith, & Howell, 1994).

Certainly, we did not write this paper to defend Herzberg. We are well aware of the methodological flaws in the research and conceptual problems with the theory as a whole. Yet, in our opinion, Herzberg began with some fundamental assumptions, the validity of which can be evaluated independent of the theory in its entirety. People react to the events of their work lives. These events drive their immediate affective states and these states can vary over time. Some events are positive, some events are negative, some features are more likely to generate positive events some features are more likely to generate negative events. These were Herzberg's basic assumptions and these ideas inform our own position.

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